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Preface

The 8th International Conference on Economic Management and Green Development (ICEMGD 2024) is an annual conference focusing on research areas including finance, economics and business management. It aims to establish a broad and interdisciplinary platform for experts, researchers, and students worldwide to present, exchange, and discuss the latest advance and development in finance, economics and business management.

This volume contains a selection of high-quality papers submitted to the workshop "Decoupling Corporate Finance Implications of Firm Climate Action" held in collaboration with the ICEMGD 2024. The workshop, chaired by Prof. Gbenga Adamolekun from Edinburgh Napier University, is part of a broader initiative to examine interdisciplinary approaches in green innovation, climate change risk, firm climate actions and climate change. Each of these papers has gained a comprehensive review by the editorial team and professional reviewers. Each paper has been examined and evaluated for its theme, structure, method, content, language, and format.

Cooperating with prestigious universities, ICEMGD 2024 organized four more workshops in Bratislava, Mucria and Beijing. Dr. Lukáš Vartiak chaired the workshop "Practicing How the EFQM Model Helps Manage the Organization", which was held at Comenius University in Bratislava. Dr. Javier Cifuentes-Faura chaired the workshop "Policies to Enhance Sustainable Development through the Green Economy", which was held at University of Murcia. Prof. Xinzhong Bao chaired the workshop "Innovative Strategies in Microeconomic Business Management", which was held at Beijing Union University. Dr. Li Chai chaired the workshop "Environmental Economics and Sustainable Business", which was held at China Agricultural University.

Besides these workshops, ICMRED 2024 also held an online session. Eminent professors from top universities worldwide were invited to deliver keynote speeches in this online session, such as Dr. Lukáš Vartiak from Comenius University in Bratislava and Dr. Javier Cifuentes-Faura from University of Murcia. They have given keynote speeches on related topics of finance, economics and business management.

On behalf of the committee, we would like to give sincere gratitude to all authors and speakers who have made their contributions to ICEMGD 2024, editors and reviewers who have guaranteed the quality of papers with their expertise, and the committee members who have devoted themselves to the success of ICEMGD 2024.

Dr. Lukáš Vartiak

General Chair of Conference Committee

Workshops

Workshop – Bratislava: Practicing How the EFQM Model Helps Manage the Organization

September 26th, 2024 (GMT+2)

Faculty of Social and Economic Sciences, Comenius University in Bratislava

Workshop Chair: Dr. Lukáš Vartiak, Associate Professor in Comenius University in Bratislava

Workshop – Murcia: Policies to Enhance Sustainable Development through the Green Economy

October 30th, 2024 (UTC+1)

Research Group on Economics, University of Murcia

Workshop Chair: Dr. Javier Cifuentes-Faura, Researcher in University of Murcia

Workshop – Edinburgh: Decoupling Corporate Finance Implications of Firm Climate Action

August 28th, 2024 (UTC+1)

The Business School, Edinburgh Napier University

Workshop Chair: Prof. Gbenga Adamolekun, Assistant Professor in Edinburgh Napier University

Workshop – Beijing: Innovative Strategies in Microeconomic Business Management

September 27th, 2024 (GMT+8)

Management College, Beijing Union University

Workshop Chair: Prof. Xinzhong Bao, Professor in Beijing Union University

Workshop – Beijing: Environmental Economics and Sustainable Business

September 21st, 2024 (GMT+8)

International College Beijing, China Agricultural University

Workshop Chair: Dr. Li Chai, Associate Professor in China Agricultural University

ICEMGD 2024 Workshop: Decoupling Corporate Finance Implications of Firm Climate Action

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The Development Dilemmas, Causes, and Countermeasures of China's Sports Rehabilitation Training Industry

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Abstract: In recent years, with people's increasing emphasis on health, the demand for China's sports rehabilitation training industry has been continuously increasing. In this context, it can provide more development momentum for the sports rehabilitation training industry, which is conducive to the continuous improvement of related medical technology, promote the continuous development of sports medicine integration, and better serve the general public. But in the continuous development of the sports rehabilitation training industry, many difficulties have also been encountered. This study mainly used literature research and logical analysis methods, combined with the current development trend and professional development of the sports rehabilitation training industry, to analyze market demand, professional talent cultivation, and the development of laws and regulations, and propose a series of improvement measures, which can be more accurate for the future development direction of the sports rehabilitation training industry. From a social point of view, it is necessary to strengthen the health awareness of some people and improve the training and professionalism of professional talents. For the government, it is to strengthen support for the sports rehabilitation training industry and strive to cultivate more compound sports rehabilitation talents, which can lay a solid foundation for the better development of the sports rehabilitation training industry.

Keywords: Sports rehabilitation training industry, development, market demand, integration of sports and medicine, talent cultivation

1. Introduction

In the context of the national strategy of "Healthy China", the health industry has become an important engine of economic growth under the new normal. With the improvement of people's living standards and the increase of life pressure in modern society, people's concept of health has gradually changed, and they are paying more and more attention to the development of physical health. As an emerging industry, the position of the sports industry in the national economy is constantly improving. With the continuous development of the sports industry, a new model of "rehabilitation+exercise" has emerged to improve people's quality of life. Of course, in order to promote the development of the sports rehabilitation industry, the government has also introduced a series of policies, providing strong policy guarantees for the development of the sports rehabilitation industry.

The model innovation of the sports rehabilitation industry, currently the development model of the sports rehabilitation industry is relatively single, lacking a certain degree of innovation and diversity.

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Generally speaking, the current rehabilitation industry mainly operates through offline promotional activities, distributing flyers, and online self-media models, lacking cooperation mechanisms with different industries such as hospitals and clubs. Therefore, exploration needs to be conducted from different perspectives and aspects. The talent cultivation and development of the sports rehabilitation industry require professional technical means to support it, including related professions such as sports coaches, rehabilitation therapists, and nutritionists. However, based on the current situation, the quality of professionals engaged in related professions is relatively low, and due to the impact of social and economic development, there is a serious loss of professional talents in some regions. Overall, the current lack of professional skills requires to strengthen the introduction of relevant talents. The policy support system for the sports rehabilitation industry is not yet perfect. As an emerging industry, the government does not have a deep understanding of the development status of the sports rehabilitation training industry. Therefore, it is necessary to have a deeper understanding and systematic study of the relevant policy environment, formulate relatively complete policies to support the coordination between the sports rehabilitation industry and the ecological environment. The premise of development is to protect the ecological environment and promote green development. The development of the environment cannot be ignored in pursuit of higher economic benefits, and the sustainable development of the sports rehabilitation and training industry should be realized [1].

The development of the sports rehabilitation industry can promote the development of the sports industry. It can meet people's diverse needs, provide more professional services, and strengthen the sustainable development of the sports rehabilitation industry. Moreover, the development of the sports rehabilitation industry can drive the development of related industrial chains, increase more employment opportunities, and thus promote the development of regional economies. Secondly, the development of the sports rehabilitation industry can enhance international competitiveness and further expand the international market. Through further research on the issues of the sports rehabilitation industry, this study can gain a deeper understanding of its impact on people's lives. The rapid development of the sports rehabilitation industry provides strong support for the rapid development of society.

The research method used in this study is mainly literature research, which involves searching for relevant literature on the sports rehabilitation training industry through Baidu Academic Network, thinking and organizing it, timely understanding the development status and problems of the sports rehabilitation training industry, and grasping the development trends. This study mainly analyzes the problems of insufficient market demand, lack of professional talents, and imperfect legal regulations in the development of the sports rehabilitation training industry, and conducts research from the perspectives of people's demand awareness and improving the professionalism of practitioners. How to develop the sports rehabilitation training industry in the context of "Great Health" China is of great significance for the further development of the combination of sports industry and medicine.

2. Literature Review

With the continuous improvement of modern people's living standards, the interaction between the sports industry, which is a pillar industry of national health, and the health industry has gradually led to the development of new industries such as sports rehabilitation. Based on the current situation of Healthy China, research on the imperfect development of the sports rehabilitation industry has certain practical and theoretical significance.

In recent years, domestic scholars have conducted increasingly in-depth research in the field of sports rehabilitation, exploring the relationship between theory and practice of sports rehabilitation from different perspectives. The theoretical basis of sports rehabilitation mainly includes sports rehabilitation medicine, physiology, traditional Chinese medicine health preservation, etc. These theories provide scientific guidance for sports rehabilitation. Significant research results have also

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been achieved in other fields of sports rehabilitation industry. Compared to domestic research, foreign countries have more advanced research on sports rehabilitation. For example, having advanced rehabilitation concepts, a comprehensive training system, a sound sports medical service institution, a strict job certificate system, targeted and specialized rehabilitation personnel, advanced rehabilitation facilities and diverse rehabilitation methods, significant characteristics in rehabilitation goals, evaluation, diagnosis, information, plans, and other aspects are the main advantages of Germany's sports rehabilitation system. In addition, the study also focused on the optimization of the sports environment and the issue of sports safety, providing strong support for the healthy development of the sports rehabilitation industry [2].

Based on the above summary and analysis of research literature, rehabilitation research in foreign countries started earlier than in China, and rehabilitation research in China is relatively incomplete. At present, domestic scholars emphasize the combination of China's national conditions and cultural characteristics in their research on sports rehabilitation, forming a rehabilitation practice system with Chinese characteristics. China has conducted in-depth research on the detection and evaluation of sports injuries, as well as the development of rehabilitation technology training, and has achieved rich research results in these fields. From the perspectives of the theoretical system and service models of sports rehabilitation, this study investigates issues such as inconsistent industry standards, lack of professional talents, and uneven service quality, providing a rich theoretical foundation and practical experience for the sports rehabilitation industry to better meet the diverse needs of the people. In addition, research by foreign scholars mainly focuses on using modern technological means to improve service quality and efficiency. For example, using big data and artificial intelligence technology to analyze and evaluate an individual's health status and exercise effectiveness, providing more accurate exercise advice and health management plans for individuals. At the same time, the enhancement of virtual reality and the application of technologies such as reality have also brought new experiences and development opportunities to the sports rehabilitation industry. Domestic scholars emphasize personalized and differentiated services based on the health status and needs of different populations. The research mainly focuses on promoting people's physical and mental health through exercise training and health management and achieving sustainable development.

3. Development Challenges of China's Sports Rehabilitation Training Industry

In the context of the development of "Great Health" in China, the sports rehabilitation and training industry, as an emerging industry, has shown significant development momentum in recent years. With the improvement of people's living standards and the support of relevant policies, the public is paying more and more attention to their physical health and can engage in corresponding sports according to their individual situation. But every sports activity has potential dangers, and the potential physical discomfort and more serious sports accidents that may occur after exercise have gradually expanded the demand for the sports rehabilitation training industry among the public [3]. Currently, China has entered a period of aging population. With the increasing number of elderly people, the demand for the sports rehabilitation industry is also expanding for those with living difficulties and chronic diseases. There is also a huge demand for the sports rehabilitation industry for the postoperative recovery and long-term action recovery of the majority of people with disabilities [4]. According to statistics, by 2022, the market size of China's sports rehabilitation industry has exceeded 100 billion yuan, demonstrating strong market potential and broad development space. This is mainly due to factors such as the continuous growth of science and technology and policy support. In summary, China's sports rehabilitation industry has achieved significant development achievements in recent years. For example, the integration and development of traditional acupuncture and moxibustion and modern technology, and the development of comprehensive rehabilitation training and treatment technology. However, with the rapid development of the market

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and the continuous intensification of competition, enterprises need to continuously enhance their competitiveness to cope with challenges, and they also encounter different development difficulties in the further development process.

3.1. Insufficient Market Demand

According to the evaluation of the implementation effect of the National Fitness Plan (2011-2015) by the General Administration of Sport of China, the proportion of people who regularly participate in physical exercise in China is 33.9%, about 460 million people. Jiao Wei, Deputy Director of the Department of Sports Rehabilitation at Beijing Sport University, believes that about 20% of the sports population will experience sports pain every year, and about 100 million people need rehabilitation treatment for sports injuries and diseases [5]. But these 100 million people mainly go to the orthopedics and rehabilitation departments of hospitals. Hospitals usually only provide pathological treatment and pay less attention to the subsequent recovery of patients, so patients may still experience symptoms such as stinging. Only a few patients may pay attention to the importance of exercise rehabilitation.

As an emerging field of physical therapy services, the public's awareness of sports rehabilitation is relatively low and has not yet established awareness of sports rehabilitation, resulting in potential consumers not being able to effectively convert into actual needs and not forming consumption hotspots, so the consumer group cannot be popularized. In terms of market promotion and promotion, the sports rehabilitation industry has not yet fully demonstrated its unique value and advantages, which further exacerbates the problem of insufficient market demand. In addition, the sports rehabilitation industry involves many treatment courses and relatively high costs, which many consumers cannot afford, further limiting the demand of some consumers. So high costs have become one of the important factors hindering the growth of market demand.

3.2. Shortage of Professional Talents

At present, the field of sports rehabilitation has not yet formed a complete education and training system, and the lack of a systematic training system has led to the supply of professional talents unable to meet market demand, and potential professional talents cannot obtain sufficient knowledge and skills, further limiting the development of the sports rehabilitation industry. According to the proposal data from the 2016 National People's Congress and Chinese People's Political Consultative Conference, there are currently only about 36000 people in China with professional qualifications as rehabilitation therapists, with only 2.65 rehabilitation therapists per 100000 population. However, the average number of physical therapists in countries such as Europe and America is 60000 people per 100000 population, and in Hong Kong it is 364000 people per 100000 population. There is currently a shortage of over 300000 rehabilitation talents in China, including 180000 physical therapists (PT) and 90000 occupational therapists (OT) [5].

Secondly, the discipline of sports rehabilitation involves multiple disciplines such as medicine, sports, and rehabilitation, which requires practitioners to possess profound professional knowledge and master interdisciplinary theoretical and practical skills. However, the interdisciplinary professional and technical training is not yet perfect, and the difficulty of curriculum design leads to the inability of professionals in this field to fully develop. Furthermore, the limited space for career development is also an important factor affecting the enthusiasm and participation of talents. It has certain limitations in career development prospects, salary and benefits, which further exacerbates the shortage of professional talents and makes it difficult to expand the scale of the industry.

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3.3. Imperfect Laws and Regulations

With the rapid development and growth of the sports rehabilitation industry in recent years, the formulation of relevant laws and regulations has significantly lagged behind, failing to keep pace with the development of the industry and market demand. The lack and lag of such laws lead to more difficulties in the development process of the industry, increasing its risks. For example, the direction of policy support is relatively single. The preferential policies of the health department have not taken into account the situation of the sports rehabilitation industry, and the policies of the sports department have not yet formed a tax and subsidy system. The distribution of preferential policies is mainly focused on provincial capital cities in the central region and developed cities in the eastern region. The lack of corresponding policy support in economically underdeveloped areas further leads to the imbalance in the development of emerging industries [6].

Secondly, due to the lack of government regulatory mechanisms for the sports rehabilitation industry, some related industries may hold a lucky mentality and engage in certain illegal and irregular behaviors, such as substandard service quality and unlicensed operations, which damage the competitive environment of the market and also harm the rights and interests of consumers, seriously hindering the further development of the sports rehabilitation industry.

4. The Causes of Difficulties in the Development of China's Sports Rehabilitation Training Industry

With the increasing living standards of the people, people are paying more and more attention to health. As an emerging industry, the sports rehabilitation industry has a weak awareness of rehabilitation among some members of the public, and the development of the industry is not yet perfect. The service structure is single, lacking personalized services, which leads to insufficient market demand for the sports rehabilitation industry. And the integration of sports and medicine is still in the initial exploration stage, with uneven regional development, resulting in relatively backward regions having less understanding of the sports rehabilitation training industry.

Secondly, the training system for sports rehabilitation talents in China is not yet sound. Talent cultivation is mainly divided into on campus and off campus. The main training objectives for sports rehabilitation training on campus are sports colleges and medical schools, but the degree of integration between the two majors is not high, so the intensity of professional talent cultivation is not enough. Outside of school, the main focus is on sports rehabilitation training institutions, but the number of training classes in this area is relatively small, resulting in a shortage of professional talents. Moreover, the sports rehabilitation industry also requires more professional knowledge, and some practitioners do not have high professional skills and qualities, which cannot meet the diverse needs of consumers [7].

Furthermore, with the continuous development of the sports rehabilitation industry, the government's legal and regulatory support for the industry is insufficient, the government's leadership is insufficient, and there is a lack of corresponding policy support, resulting in some enterprises exploiting legal loopholes. The cost of the sports rehabilitation industry is relatively high, and in the current socio-economic environment, some consumers have limited payment ability, which further hinders the development of the sports rehabilitation industry.

5. Countermeasure Analysis

For the current situation, the first thing to do is to enhance public health awareness. The scientific principles, time methods, and practical effects of sports rehabilitation can be widely disseminated through new media such as social media and online platforms, or by distributing flyers, organizing related activities, and health lectures according to the characteristics and needs of different groups of

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people. Of course, this study can also provide expert answers in different regions to answer a series of health-related questions from the public, and increase their further understanding and awareness of sports rehabilitation. After raising public awareness, the market demand for sports rehabilitation will increase, so the industry needs to improve the corresponding service quality and efficiency, and innovate development models. This study needs to provide targeted services to meet the needs of different age groups and needs of the public. For the needs of social development, the development of the sports rehabilitation industry needs to make corresponding strategic adjustments with the development of society, strengthen the brand value of the industry itself, and implement diversified services to meet the growing diversified needs of people, ensuring that services are in line with social development.

Secondly, research shows to increase the training efforts for professionals. Firstly, it is necessary to clarify the specific goals of cultivating the sports rehabilitation training industry, closely following the needs of society, in order to combine various elements of the training model. The ultimate goal of cultivating excellent professional talents is to better serve the people. The key to talent cultivation goals lies in the degree of attention given by the government, market, and higher education institutions. To strengthen the development of sports medicine integration, various universities combine their own characteristics and the development needs of sports medicine integration to enhance students' practical abilities and enhance their comprehensive quality. Therefore, in terms of curriculum setting, this study must combine the practicality of sports rehabilitation training with the theory of professional knowledge, strengthen the construction of relevant education and training systems, optimize curriculum setting, ensure the progressiveness and practicality of curriculum content, and provide necessary skills and knowledge for potential professional talents. Of course, universities need to further implement different school enterprise cooperation, increase the construction of training bases both on and off campus, improve teaching level, enrich teaching methods, and provide students with more practical opportunities and experience in learning diverse technologies. Universities can also invest in sending students abroad for further studies, combining professional and technical exchanges in relevant knowledge fields both domestically and internationally, to enhance the professionalism and practicality of talents. Universities should strengthen the cultivation of innovative talents and faculty, organically combine sports, rehabilitation, and health, and create a new model of educational development, laying a solid foundation for future professional talents [8].

Afterwards, it is also necessary to expand the space for career development and provide policy support. The sports rehabilitation training industry can integrate and develop with other related industries, leverage the resource allocation role of the market and government, innovate more development models, provide more career development opportunities, and attract higher quality professional talents. This study also needs to strengthen industry regulation and standardization construction. For example, some institutions that violate rules will be punished accordingly, and then publicized to remind other institutions or industries of their self-discipline and standardization. In recent years, the Central Committee of the Communist Party of China and the State Council have attached great importance to the development of the health service industry. They have issued a series of documents, including the "Several Opinions of the State Council on Promoting the Development of the Health Service Industry", "Several Policy Measures on Accelerating the Development of Social Medical Institutions", and the "Notice of the General Office of the State Council on Further Encouraging and Guiding Social Capital to Establish Medical Institutions". These documents provide policy guarantees and support for private medical institutions in cleaning up and regulating the approval process for the establishment of medical institutions, reducing operational approval restrictions, implementing tax policies for medical institutions, and regulating fee policies, encouraging private medical institutions to play a greater role in the health service industry [9].

Research shows to strengthen the government's policy support for the sports rehabilitation industry and standardize laws and regulations, so that the private rehabilitation training industry can enjoy equal preferential policies. The sports rehabilitation industry also needs to strengthen its own compliance management, and jointly promote the rapid development of the sports rehabilitation industry [10].

6. Conclusion

According to the research results on the sports rehabilitation industry, in recent years, with the improvement of people's health awareness and the continuous progress of sports rehabilitation technology, the market size of China's sports rehabilitation industry has rapidly expanded. According to statistics, the current market size has reached billions of yuan, and it is expected to continue to maintain rapid growth in the coming years. With the transformation of people's health concepts and the popularization of exercise and fitness, more and more people are paying attention to post exercise rehabilitation. Meanwhile, some athletes and athlete groups also require professional rehabilitation services to help them quickly recover their physical condition. Therefore, the demand for sports rehabilitation services is showing an increasing trend year by year, which further promotes the sustainable development of China's sports rehabilitation training industry.

Therefore, research on the sports rehabilitation training industry has far-reaching significance and influence. The sports rehabilitation industry, as a core component of the sports and health industry, is of great significance for promoting the transformation and upgrading of the sports industry through in-depth research and sustainable development. Against the backdrop of "Great Health" in China, people's demand for sports rehabilitation is steadily increasing, further promoting the development of the sports and health industry and improving people's overall health level. At the same time, the development of the sports rehabilitation training industry can also promote the development of related industry chains and advance related technologies. Secondly, scientific and systematic sports rehabilitation training programs and rehabilitation treatments have become key means for athletes to recover their physical functions, reduce the risk of sports injuries, and shorten the recovery cycle. The sports rehabilitation industry can pay attention to the recovery status of athletes after injuries, enabling them to achieve comprehensive development, improve their competitive level, and ensure that their career is more sustainable and stable. With the promotion and popularization of rehabilitation knowledge, people attach more importance to health, and the sports rehabilitation industry provides more scientific exercise methods for the public, further improving their quality of life.

At present, there is still great development space for the sports rehabilitation training industry. There is relatively little theoretical research on sports rehabilitation, lacking in-depth systematic and innovative research. This has led to an incomplete theoretical system for sports rehabilitation, making it difficult to meet the growing market demand. Furthermore, empirical research is relatively scarce and interdisciplinary research is lacking. Currently, there is relatively little interdisciplinary research in the field of sports rehabilitation in China, lacking a research model that integrates multiple disciplines. So in the future development direction, this study can draw on advanced research experience from abroad and strengthen research on the integration of sports and medicine in the sports rehabilitation training industry. Research shows can deepen the construction of a collaborative development model between community medical care and sports and health industry, strengthen the planning and guidance of the sports and health industry, utilize the development situation of government coordination and policy guidance, enhance health services for people, promote the deep cooperation and supplementation between sports and medicine, and cultivate more composite sports and rehabilitation talents. The development of the sports rehabilitation training industry is conducive

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to enhancing the health level of the public, developing higher service levels and quality, and laying a solid foundation for the long-term development of the sports rehabilitation training industry.

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Cross-Border E-commerce Logistics System Optimization Analysis

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Abstract: Cross-border e-commerce is a rapidly growing market segment that means high-quality logistic support for long-term growth. This paper investigates the peculiarities of present cross-border e-commerce logistics conditions, defines existing challenges, and suggests improvement ideas. In this case, the study reviews literature and case studies to examine the issues affecting cross-border logistics, including long transit times, high freight costs, and bureaucratic formalities in accessing various customs. This research is designed to help readers understand the specific forces that affect logistics configuration and suggest methods to improve the performance and quality of the logistics services being delivered to customers. Through the realization of these optimization measures, the study will aim to play a significant role in enhancing the sustainable growth of the cross-border e-commerce sector and preventing it from being out-competed in the world market. The findings of this research highlight the critical strategies and technological innovations necessary to address these challenges and demonstrate their potential to improve logistics efficiency and reduce costs significantly.

Keywords: E-commerce, cross-border transport, service system, post-sale optimization, long-run productivity

1. Introduction

Cross-border e-commerce (CBE) is one of the recent trends in the global purchasing and selling of goods and services since it has experimented with new ways of conducting business all over the world. This has enabled new companies of all sizes to market their goods and services to consumers across the globe, eradicating restrictions and hurdles that used to limit the international market. A logistic system is, therefore, an ingenious component of this transition process and acts as a framework supporting the e-commerce environment. Effective flow has an impact not only on delivering the services or products on time but also on increasing customers' satisfaction and decreasing organizational expenses more than other functional activities.

Nevertheless, the logistics system of CBE has its issues that can be quite dissimilar to that of the United States. Some of these issues are the longer time taken for transit because of the distances, high costs, which include sea freight costs and customs tariffs, and some complicated formalities with customs that cause changes in transit time and cost. In addition, the varied nature of regulatory and standard practices in different countries can hinder efficiency in the operations of a logistics company or business while posing potential risks for non-adherence to such rules and regulations [1]. Based

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on these trends, the provisions of measures that would enhance the cross-border e-commerce logistics system appear tenable. This paper also aims to look at the current characteristics of cross-border e-commerce logistics, look at the problems that are prevalent, and then analyze what can be done to mitigate them. In this paper, the research questions, derived from the identified gaps in the literature, will be formulated as follows: This paper aims to identify the factors leading to inefficiencies and high costs in the analyzed logistics process. Additionally, it outlines the measures that can be implemented to eliminate these inefficiencies and reduce costs. With the help of these measures of optimization, businesses can achieve the goal of increasing the level of logistics' operational dependability and reliability, thus adding value to the customer's satisfaction and contributing to the sustainable growth of the cross-border eCommerce industry. This research is of significance in the current period. The global e-commerce market is growing with the rationale that efficient logistics form a key aspect of the success of any business venture in the global market.

2. Current State and Challenges of Cross-Border E-commerce Logistics

2.1. Current Characteristics and Forms of Cross-Border E-commerce Logistics

The overall map of cross-border e-commerce has unique features compared to a logistics map in supply chain logistics. One of the vital attributes is the international focus, which means that multiple international countries and regions need to be effectively managed. This includes hedging across different regulatory environments, managing through different customs, and coping with differing delivery norms. Moreover, international e-commerce logistical solutions frequently include the use of various means of transportation, i.e., air, sea, and ground transportation, in order to keep costs reasonable and to deliver goods as fast as possible [2]. Technology, including real-time tracking systems and automated warehouses, has also been established as an important factor that increases the levels of logistics transparency.

2.2. Analysis of Cross-Border E-commerce Logistics Development Trends

The X-Border e-commerce logistics sector has become the new frontier for the growth of cross-border commerce due to enhanced innovation in technologies and changing customer behavior. As the industry evolves, informed trends include self-employed routes through AI technology, secure transactions thanks to blockchain, and delivery through drones for the last mile of the process. In addition, there has been a recent push for sustainability, where many companies are seeking out recyclable products for packaging and are turning more towards carbon-neutral delivery services.

2.3. Key Players in Cross-Border E-commerce Logistics

Various sectors are involved in cross-border e-commerce logistics, including e-commerce companies, third-party logistics providers, customs brokers, and last-mile delivery carriers. Multinational and prominent online retail companies like Amazon and Alibaba have grown complex logistics systems to accommodate their international businesses. Purchasing agents, particularly those involved in the import and export of goods, can seek the assistance of logistics service providers like DHL, FedEx, and UPS to facilitate international transportation [3]. Customs agents are intermediaries that help the smooth conducting of the customs process, and last-mile delivery is the delivery of consignments to consumers.

2.4. Cross-Border E-commerce Logistics Models and Their Characteristics

There are various logistics models present in cross-border e-commerce, and each one has it is own features. One of the modes of transport is direct delivery, where products are delivered directly from

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the seller to the buyer. Another mode involves storage centers, which store products in strategic points near the markets. A third mode is drop shipments, where suppliers rely on agents to deliver the products. Each model has a certain amount of flexibility, cost, and time factors, thus impacting the extent and manner in which the logistics system is effective and efficient.

3. Problem Analysis

The Kangaroo Supply Chain Management (KSCM) cross-border e-commerce logistics organizing form confronts three important difficulties that challenge the applicability and performance of the supply chain. These challenges can have been termed as, challenges of timeliness, higher cost of logistics, and logistics information gap. To have a clearer view of these problems, this section seeks to explain each of them in detail, together with their effect on the cross-border e-commerce environment.

3.1. Causes of Low Logistics Timeliness

The last concern that is very crucial in cross-border e-commerce logistics is the timeliness of the deliveries. Customs procedures remain largely different around the world, and some might even take time to clear the goods. Products may require some steep scrutiny, and any variance from papers will take extra time to address. The lack of well-defined procedures on the matter also contributes to the issue, and an intervention by multiple agencies only complicates the matter. Transportation-related problems are very common in practically every part of the world, particularly in developing nations. Challenges in direct flights, sea routes, and efficient ground transport, particularly for cross-country shipments, mean that the delivery time is greatly affected [4]. Besides, such factors as weather conditions during the different seasons of the year make transport to and from the airport messy, further increasing the duration taken to travel.

Delays at strategic origins of movement, particularly near key transshipment facilities, for example, ports and airports, are frequent. Large quantities of traffic, low accommodative capacities, and slow transit at these nodes may lead to such congestion. These areas of weakness were brought to the forefront of the facade during the COVID-19 crisis, with many logistical hubs grappling with the increased demand and workforce issues. Cross-borders are complex processes involving manufacturers, freight forwarders, customs brokers, and last-mile delivery providers, all of whom are expected to work together to ensure efficiency [5]. This information indicates that failure of outbound, inbound, or horizontal communication between these parties can result in delays. For instance, a delay in customs clearance means an interruption of the supply chain, followed by transport interruptions and delays in delivery.

3.2. Factors Contributing to High Logistics Costs

Another significant problem in cross-border e-commerce is the relatively high cost that has to be spent on the delivery of products. These costs can make a huge dent in the revenues of e-commerce businesses and put a strain on the consumer price of products. Three factors contribute to these high costs.

Overseas shipping is generally more costly than domestic shipping because it entails a larger distance to be covered, and products will require other means of transport, such as railways, roads, etc., before reaching distant client's premises. Air freight is especially expensive, but it is frequently the only mode of transport that enables meeting the deadlines. Comparatively, the sea freight carries longer transit time, plus it also incurs additional costs like handling charges at the port. Taxes on goods for international purchases include customs duties, value-added taxes (VAT), and other import taxes, contributing heavily to the cost [6]. A number of these fees are standard across countries and

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products and have different costs by product category, making costs hard to determine and highly volatile. Sometimes, businesses are forced to include these costs in their calculations to set prices for their commodities, which are often relatively high.

In export and import operations, the consignment needs protection in transit and through several phases of handling; that is why customized packaging is needed. The packaging used should be strong enough to withstand transportation shocks that may be characteristic of most international freight, leading to high material and labor costs. Further, an extra layer of cost is incurred due to the requirement of special shipment, especially for sensitive items that require being kept at a certain temperature.

3.3. Addressing the Issue of Logistics Information Asymmetry

Information inequality especially affects logistics information, thus representing a major challenge to effective cross-border e-commerce. Information invisibility can also occur when there is an unequal distribution of information across the various participants in a supply chain, which results in inefficiencies and mistakes. Some of the factors which have led to this development. This study identifies a series of obstacles, including the absence of visibility concerning the position of supplies in transit. If the appropriate information cannot be obtained, and partners do not update this information frequently enough, then businesses and consumers cannot monitor shipments efficiently [7]. This leads to issues such as ambiguity, misunderstanding between the client and supplier, and reduced customer satisfaction. For instance, various parties involved in the logistics chain employ diverse appliances and use different formats of data. Gaps in standardization of such systems thus produce elements of conflict when information exchange is carried out across different institutions. For instance, relevant systems that an original equipment manufacturer (OEM) deploys may be different from those of a freight forwarder; thus, data translation takes place, and information sharing experiences delays.

Two major identified challenges include traditional communication methods like emails and telephone calls, which are slow and can cause a communication breakdown. These strategies are ineffective in dealing with the global and fluid realities of global and fluid logistics. These miscommunications can include delays, not receiving new information, or parcels and shipments not being handled properly [8]. That is why information security has particular importance in cross-border logistics activities. Some of the challenges are the sharing of data, including shipping documents and payment information, that is exposed to cyber threats in the sharing process. This makes it vital to protect the data as they are crucial to build and retain trust amongst the supply chain partners as well as to increase efficiency.

For cross-border e-commerce logistics, there are three major issues, which are delaying logistics time, high logistics cost, and the problem of logistics information dissatisfaction. Solving these problems does not involve only increasing the efficiency of customs formalities, transport, and communication facilities and improving cooperation between the parties but also using technologies to solve problems related to the disclosure and visibility of information. Thus, addressing those issues helps both businesses reach better operational performance in terms of reliability, effectiveness, and costs, and e-commerce logistics grow as an essential segment of the global e-commerce market sustainably.

4. Optimization Suggestions

4.1. Strategies and Measures to Enhance Logistics Efficiency

The optimization of customs clearance can be considered one of the most significant missions in perspective of minimizing the corresponding times. There is also one more useful measure, namely

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the use of the most high-technology electronic data interchange (EDI), which enables the delivery of shipping documents and customs declarations before actual shipment. This can also help to hasten the clearance time since the customs authorities will be able to review the documents and effects prior to products entering their country. Furthermore, participation in programs like the Authorized Economic Operator (AEO) can also be a boon to traders, as these programs lead to more streamlined and faster trade processes in front of customs.

Transport infrastructure emphasizes the necessity to invest in transportation infrastructure, particularly in the developing countries in this case. There is a possibility of cooperation with governments and private sectors, which will assist in the construction as well as the improvement of airports, seaports, and other roads. Furthermore, increasing the utilization of combined transport, which is the kind of transport that involves the operation of at least two modes of transport, can also be adopted [9]. A case in point is when sophisticated transportation equipment, such as delivery methods (by rail and truck), can determine better ways to shuttle consignments in the least time.

Integrating modern technology like Artificial Intelligence and Machine learning, as well as Internet of Things technology, can increase logistics efficiency. It is also valuable for optimizing the delivery path and knowing which route would be the one where delivery would be both quickest and least expensive. Internet of Things devices can allow tracking and monitoring of consignments in real-time; they can alert the shippers or transporters when problems develop during transportation.

4.2. Cost Reduction Optimization Plans

Some of the ways that can help a company minimize transportation expenses are presented below. Organizations can negotiate with carriers on the possible volumes of shipment and the corresponding rates for shipping. This way, rates for a large quantity of shipments are affordable and businesspeople can take advantage of the economy of scale. It will not only decrease the cost of shipping per unit but also greatly impact making the arrangement of logistics easier.

Minimizing packaging size and weight are two good reasons to grab the attention of key decision-makers since it means cost reduction is an option. There is a need for packagers to ensure that the packaging materials that they use offer protection to the goods and, at the same time, ensure that an excess use of these materials is not made. Standardization of the packaging dimensions can also enhance the ease of handling the products and in addition, enhancement of packaging dimensions will also reduce the dimensions charges levied by the carriers. Businesses running companies should use free trade agreements (FTAs) and preferential trade policies to avoid or reduce costs like customs duties and taxes. Companies reap the advantages of reduced tariff measures by understanding and fully adapting to rules of origin. This necessitates adequate FTA's knowledge of the requirement and the ability to furnish relevant documents to customs.

4.3. Recommendations for Optimizing Logistics Information Flow

Introducing the concept of relatively unified integrated digital solutions, the work process may be optimized and the information exchange between the enterprises accelerated. Such systems can simultaneously involve manufacturers, logistics companies, customs agencies, and buyer-consumers in an integrated environment for tracking and controlling the delivery of the cargo. The solutions in the cloud help in making data available in real time so that there is no doubt about the info shared by different departments.

Business documents such as contracts, invoices, and shipping records can be safely and openly stored on the Blockchain. The nature of blockchain means that there is a permanent record for all transactions, which can increase the credibility of shipping documents, limit the amount of fraud, and build more reliable relations between shipper and receiver. Its application in smart contracts on the

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blockchain, the payment process, and customs declaration, for instance, also helps to optimize logistics even more [10]. It is critical to find common means of data exchange in order to enhance data management or, in other words, to use a common format or protocol. Some of the EPCIS standards that have been developed for the industry to use include the Electronic Product Code Information Services (EPCIS), which brings about compatibility and interconnectivity. Cleansing the format decreases the likelihood of a translation error and enables efficient data exchange.

5. Conclusion

Therefore, it can be stated that the enhancement of the logistics system factors is crucial for cross-border e-commerce to create better conditions toward efficiency, minimizing costs, and providing the best experience to customers. The issues of low timeliness, high cost, and information dysfunction are important barriers that hinder the realization of these gains. Through the improvement of the customs clearance procedures, optimization of transport and transit infrastructure, as well as levering artificial intelligence and the conceptualization of the Internet of Things, enterprises can contribute to the extended effectiveness of their supply chain management.

Moreover, increasing shipping costs, finding cheaper packaging options, buying goods in bulk, and taking advantage of FTA could contribute to lowering costs and helping cross-border e-commerce become more competitive. Introducing and optimizing combinations of transportation modes and improving mobility coordination between the actors may also help to balance cost and time and provide customers with more efficient and cheap transport.

Optimization of the means of shipment is also another crucial aspect of logistics improvement that can be named. Specific solutions will include the establishment of linkages between digital platforms, the implementation of blockchain technology, the work on technical standards and common data format, and the strengthening of cybersecurity measures will help to overcome the problem of information asymmetry and support the full provision of all the relevant information to stakeholders. The implementation of such transparency and reliability is important for obtaining trust and optimized operationalization in the key network of logistics.

To implement these strategies and measures, it is necessary to form strategic partnerships with other stakeholders in the logistics supply chain, such as LSPs and customs offices, as well as technology partners. Such cooperation can help adopt sophisticated technologies that are crucial to the proper operations of the logistics working system.

In conclusion, it can be highlighted that the problem of improving cross-border e-commerce logistics is crucial, and an effective solution will contribute not only to the development of the industry but also to the provision of a high level of consumer satisfaction. The conclusions provide information that businesses, authorities, supply chain academics, and supply chain managers can use to address challenges and leverage opportunities for e-commerce across the global market. In addition, this study adds to the currently available knowledge of SCM in the fields of cross-border trading.

Of course, it is necessary to indicate certain obvious drawbacks of this study l the research mainly concerns the situation in cross-border e-commerce logistics and only provides recommendations for its future development. Future research could further focus on the logistics and delivery efficiency of particular intermediaries in the context of emerging technologies such as blockchain and AI or the efficiency and potential of government initiatives to foster cross-border trade. However, this work could have been complemented by empirical investigations to confirm the efficiency of the proposed optimization measures for improving supply chain performance, thereby adding to the practical relevance of the research findings.

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Crafting Luxury Marketing Strategy: Strategic Integration of Sustainability and Market Leadership of Hermes

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Abstract: This study delves into Hermes' strategic operations in the luxury goods market, focusing on its brand management, brand marketing, and their profound impact on corporate sustainability. Anchored in its rich history and exceptional craftsmanship, Hermes has strategically positioned itself as a leader in the global luxury market through market segmentation and innovative marketing strategies. Particularly amidst ethical controversies and increasing consumer concerns about ecological issues, Hermes has enhanced its market competitiveness through initiatives such as ethical sourcing and environmental advocacy, establishing itself as a benchmark in corporate social responsibility (CSR). Additionally, starting from the definition of luxury goods, the study analyzes Hermes' current brand development status, emphasizing brand management and marketing. Sustainable development as a core value continues to influence luxury brands' marketing strategies, targeting specific middle and upper social classes to ensure brand image alignment with the identity and status of target consumers. Through an analysis of Hermes' marketing strategies, this study provides insights into luxury consumers' psychological needs and behavioral habits.

Keywords: Luxury Goods Market, Corporate Social Responsibility, Sustainable Development, Hermes

1. Introduction

Hermes was founded by Thierry Hermes in 1837 in Paris, France, initially as a harness shop. However, it wasn't until 1880 that Charles Hermes inherited the company and relocated it to the famous Rue de Faubourg in Paris that it began to flourish. Over time, Hermes has constantly adapted its production and management methods to changing trends, developing into a global icon of luxury goods. Today, Hermes operates in the nearly $300 billion luxury market worldwide, offering products in 17 categories, including handbags, scarves and ties, men's and women's clothing, and lifestyle items. This remarkable growth can be attributed to the brand's skillful strategic marketing and ability to resonate with different market segments. Hermes' products seamlessly integrate into the lifestyle and quality aspirations of its target consumers, especially affluent young people and professionals, making it a highly anticipated global brand [1, 2].

Commitment to craftsmanship, quality and sustainability Hermes' deep-rooted values focus on traditional craftsmanship and unwavering quality [3]. Its Sustainable sourcing and environmental management program demonstrates this commitment, positioning it as a brand that values ethical behavior and transparency [4]. In today's era of accountability and fairness, Hermes goes beyond

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compliance standards to integrate sustainability into every aspect of its operations, which aligns with what customers expect from a responsible brand.

Amid intense competition and changing consumer tastes, Hermes has maintained its leadership position in the luxury industry by strategically blending marketing elements [5]. Hermes solidifies its market dominance through a carefully designed marketing mix of products, prices, locations and promotions. It offers a wide range of high-quality products, selected store locations, and Spaces designed like art museums or studios, meeting consumer expectations for quality and positioning itself as a symbol of culture and art. This unique approach enhances the brand's uniqueness and reflects Hermes' respect for traditional craftsmanship, luxury sector innovation, and sustainability commitment [6, 7]. By reducing its environmental impact and promoting fair trade, Hermes sets industry standards in line with society's growing concerns about ethical consumerism, reflecting its broad corporate social responsibility vision.

2. The 4P Analysis of Hermes

Hermes' profound understanding of market segmentation and marketing mix has enabled it to resonate deeply with diverse customers globally [8]. It analyzes regional, cultural, and psychological factors and focuses on affluent, discerning consumers seeking high-end crafts. To expand its customer base, Hermes targets young, wealthy consumers, aligning its offerings with their lifestyle and fostering loyalty through unique brand experiences.

Hermes' marketing strategy encompasses product innovation, pricing strategies, strategic positioning, and engaging promotion techniques [9]. It expands its product offering to cater to diverse customer preferences, including high-end leather goods, fashion apparel, jewelry, and homewares. The brand is renowned for its product innovation, introducing limited editions and special collections that cater to high-end consumers' desires for exclusive, personalized luxury items. This inclusive strategy resonates with a broad customer base, ensuring everyone can find a Hermes product that matches their unique taste.

Hermes' premium pricing strategy sets the brand apart as a leader in luxury, catering to discerning customers seeking superior quality and exceptional design. By strategically placing stores in key cities globally, Hermes ensures its presence in prestigious shopping districts, enhancing visibility and accessibility to its exclusive offerings. This strategic approach reinforces Hermes' stature as a top luxury brand and broadens its market reach, attracting a wider audience of affluent consumers who appreciate its reputation for excellence.

Hermes' marketing strategy extends beyond traditional advertising to cultivate a loyal community. The brand fosters meaningful customer relationships through brand storytelling, social media engagement, and high-end events. Hermes creates a rich brand culture that resonates with its target audience by exhibiting its history, collaborations with artists, and curating exhibitions. Its robust online presence and ethical-focused public relations campaign enhance its sales performance and establish lasting customer bonds. Through a well-executed combination of the 4P marketing mix - product, price, place, and promotion - Hermes solidifies its position as a leading global luxury brand, attracting a diverse customer base and Projecting an image of excellence, uniqueness, and cultural identity.

Hermes' market segmentation strategy centers around lifestyle, values, and attitudes, emphasizing sustainability and social responsibility. Using sustainable materials, waste reduction, and promoting eco-friendly products, Hermes connects with consumers who prioritize environmental and social consciousness, fostering allegiance to the brand. By actively working to minimize its ecological footprint, Hermes aims to fortify its market presence. This is exemplified through the adoption of renewable materials and the advocacy for sustainable practices, establishing a profound bond with ethically-minded consumers who seek to align with brands that share their values.

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Hermes stores transcend mere retail spaces, functioning as hubs of culture and art that foster social connections and celebrate the brand's legacy of skilled artistry and superiority. Hermes caters to the elite clientele through exclusive offerings and luxurious shopping experiences while reinforcing its distinctiveness and cultural ethos. Despite fierce market competition and shifting consumer tastes, Hermes' dedication to innovation and sustainability paves the way for novel market segmentation and product advancement, creating fresh prospects for growth and differentiation in the ever-evolving luxury landscape.

Hermes has embraced the significance of digital interaction in its marketing strategy, emphasizing engaging with a global audience through social media channels and virtual events to enrich the customer journey [10]. Demonstrating its forward-looking stance, the brand utilizes technology to offer enhanced customer service, like online customization and personalized suggestions. Beyond elevating its brand image, Hermes champions sustainability efforts and community involvement, aligning with customer values to cultivate stronger bonds and loyalty. This strategic blend of digital innovation and commitment to social responsibility amplifies Hermes' appeal and solidifies its position as a brand that resonates with its clientele on a deeper level.

Incorporating key strategic components like product, pricing, positioning, and promotion into Hermes' marketing strategy is an ongoing, dynamic process that demands continual assessment and adjustment. As consumer inclinations steer towards sustainable and ethical consumption, Hermes has demonstrated proactive leadership by championing corporate responsibility alongside profitability. This commitment has solidified its premier status in the global luxury sphere, positioning Hermes as the frontrunner in aligning business success with ethical values and sustainable practices.

3. Social and Ethical Practices

Hermes handbags have won the hearts of consumers worldwide with their superior quality and unique designs, and its critical raw material, leather, plays a vital role in the manufacturing process. This physical and chemical treatment of animal skin gives Hermes handbags unparalleled texture and beauty. However, while pursuing excellence, Hermes also faces ethical and environmental issues, such as the use of wild animal fur. These issues affect its supply chain and challenge its brand image and marketing strategy. As a leading global luxury brand, Hermes must actively respond to these challenges and achieve sustainable development while maintaining its unique charm.

3.1. Ethical Sourcing and Supply Chain Management

The ethical sourcing and supply chain management challenges Hermes faces must be addressed. Despite its reputation for craftsmanship and high-quality materials, the moral and environmental controversies caused by using materials such as wild animal fur put the brand's image at risk. To address this issue, Hermes should actively adjust its supply chain management strategy to ensure that the procurement of materials meets ethical and sustainable standards. This is not only related to the brand image but also affects the trust and loyalty of customers. Only through these means can Hermes consolidate its market position and secure the long-term favor of consumers.

Hermes can further enhance its brand's positive image when planning its marketing strategy by highlighting its strong commitment to ethical sourcing. For example, the company can use its advertising and promotional materials to promote its sustainable sourcing and environmental protection efforts. Open and transparent supply chain management processes vividly demonstrate the company's strong commitment to social responsibility. This well-thought-out strategy will help Hermes attract customers who value ethical consumption while creating a shining environmental leader and ethical model image for Hermes in a highly competitive market environment.

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3.2. Environmental Sustainability

Hermes' efforts in environmental sustainability are commendable. The company is actively reducing the negative impact of production on the environment and adopting more environmentally friendly materials and processes. By improving its environmental management practices, Hermes meets the expectations of environmentally conscious consumers and becomes a model of sustainable development in the luxury industry. This forward-looking move protects precious natural resources and drives the entire industry toward a greener and more sustainable direction.

In terms of marketing strategy, Hermes has significantly enhanced its brand image through well-designed environmental campaigns. For example, launching a unique, limited-edition environmentally friendly product line and widely publicizing its environmental protection initiatives through social media and advertising. In addition, actively participating in and sponsoring various ecological protection projects can enhance the brand's visibility in ecological protection and enable it to occupy a favorable position in market competition. These strategies can attract consumers who deeply understand environmental protection and consolidate and enhance Hermes' market competitiveness.

3.3. Community Support and Fair Trade

Hermes' corporate social responsibility is not limited to environmental issues but includes areas such as community support and fair trade. The company is committed to supporting the development of communities in production areas to achieve the dual goals of economic and social sustainability. By implementing fair trade policies and community support programs, Hermes aims to improve the living standards of its producers while strengthening its position as an ethical brand in the market. Such strategic choices highlight the brand's social responsibility and set an example for the industry's sustainable development.

Hermes uses its community support and fair trade stories to deepen its emotional connection with consumers in marketing. Channels such as websites, social media, and advertising films can all become a stage to showcase the company's efforts to promote the development of producer communities. This will not only deepen customers' feelings for the Hermes brand but will also greatly enhance Hermes' image in terms of social responsibility and ethical standards. This move enhances the brand's appeal and injects vitality into the industry's sustainable development.

3.4. Challenges and Brand Image

While practicing corporate social responsibility, Hermes has put much effort into it but still faces various challenges. Among them, the use of wild animal fur has not only caused strong protests from environmental organizations but also reduced consumers' trust in the brand. Hermes must take transparent and responsible measures to meet these challenges when its corporate social responsibility commitments are effectively implemented. Hermes must adopt transparent and responsible measures to address these challenges, ensuring that its corporate social responsibility commitments are effectively implemented.

In terms of marketing strategy, in the face of controversial issues such as the use of wild animal fur, Hermes can take positive measures to maintain a positive brand image. Specifically, Hermes can make public statements, develop clear action plans to reduce or stop using wild animal fur and demonstrate its continued efforts in supply chain transparency and environmental practices. This transparent approach can not only effectively restore and maintain consumer trust but also highlight the integrity and reliability of the brand, thereby enhancing its market position.

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4. Conclusion

Hermes' strategic operations demonstrate a solid commitment to CSR, integrating ethical sourcing, environmental sustainability, and community engagement into its core business model. This approach has established Hermès as a leader in the global luxury market, appealing to affluent young consumers and professionals through precise market segmentation and innovative marketing strategies. Despite its success, Hermes faces ethical controversies surrounding raw materials and increasing consumer concerns about environmental impact. Navigating these challenges requires continuous innovation in its supply chain and strengthened sustainability practices to maintain market leadership amid evolving consumer trends. This study provides a comprehensive analysis of Hermes' impact on the luxury market and consumer behavior, emphasizing the role of ethical practices in driving sustainability and social value creation.

Future studies can further explore Hermes' efforts in product development, innovation for environmental sustainability, and the promotion of ethical sourcing and community engagement worldwide. Especially with increasing ecological awareness, exploring how Hermes can integrate these initiatives into its business model and how they affect customer loyalty and brand perception is challenging. At the same time, a case study of Hermes' CSR practices in different cultural and regulatory environments reveals the unique challenges and valuable opportunities it faces. Overall, the study highlights the complexity and importance of integrating business strategy with ethical considerations at Hermes, demonstrating the brand's unique ability and forward-looking vision in facing the dual challenges of social responsibility and business interests. Hermes' relentless pursuit of quality, sustainability and community engagement provides examples of practice for other companies and new ideas and insights for researchers in the field of CSR, heralding a future in which business success is closely linked to social responsibility.

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Impact of Short Video Marketing on Film Promotion: A Case Study of Douyin Platform

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Abstract: Short video platforms, with their ease of content production, wide dissemination, and large user base, have become important mediums in the internet, providing new opportunities for film marketing and promotion. This study explores the use and effects of short video platforms (Douyin) in film marketing. Through case analysis and in-depth interviews, short video marketing has significant advantages in disseminating film information, attracting audiences with diverse content forms, and increasing exposure and appeal. However, issues like excessive plot leakage and content homogenization may affect audience expectations and viewing experience. The study also reveals that short video marketing excels in emotional resonance and guiding social topics but should avoid over-reliance on star power and misleading promotions. Based on these findings, the study recommends optimizing short video film marketing strategies, including maintaining content novelty, enhancing emotional marketing, effectively using audiovisual language, and accurately targeting audiences to improve marketing effectiveness and audience engagement.

Keywords: Short Video Marketing, Film Promotion, Douyin Platform, Audience Engagement

1. Introduction

With the rapid development of digital media and the rise of online mass discourse, a new era of small-screen image consumption has ushered in. With the convenience of content production, the wide range of dissemination, and the high coverage of the number of users, short video platforms have become an important type of discourse in the Internet, providing a new scenario for film marketing and publicity. Although many studies have explored short video marketing, most focus on exploring the relationship between short video marketing and audience consumption behavior or carry out case studies for specific films [1, 2]. A review of existing studies reveals a need for more research on specific short video platforms specific short video platforms. Douyin is an important platform for short video communication for film marketing, and many films will open official Douyin accounts and release short video marketing materials. The short video on movie marketing in this article refers to the short video marketing materials published by official accounts related to movies on the Douyin platform. The study selected the Douyin platform for case analysis, combined with in-depth interviews, to explore the strategy of short video marketing.

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2. Literature Review

Short video marketing for movies often focuses on movie clips, audience reactions, shooting footage, etc. In the research on short video marketing, the early research paid more attention to the changes in film marketing in the current digital environment. It focused on online video marketing without strict video length definitions and distinctions. The perceived humor and multimedia effects of online video marketing positively affect users' attitudes toward accepting online videos and their willingness to forward them [3]. Further, movie trailer-sharing behavior positively impacts box office revenue [4], confirming that appropriate online video marketing of movies can stimulate consumers' theatrical consumption behavior.

With the increasingly close cooperation between film marketing companies and short video platforms, more recent attention has focused on short video marketing. Several studies thus far have linked short videos with consumers' theatrical consumption behavior and box office revenue. Research shows a significant and stable positive correlation between the number of short video plays and the box office revenue of movies [5]. The content identity of short videos positively impacts the audience's willingness to consume in theaters, in which the audience's emotional response and psychological distance play a mediating role. Much of the current literature on short video marketing pays particular attention to its strategies and characteristics. Short video applications reflect equal sociality, diversity of creation, and timeliness of communication in film marketing. However, in the early stage of film marketing, short video marketing has the problems of monotonous content, low recognition and investment, and a vague conversion rate [6]. The audience's presence is an important source of the "sociality" of the film, and it is internalized in every aspect of film creation and criticism as a collection of concepts and practices. Influenced by the new media, the audience in the new media era is a user presence with obvious media usage characteristics compared with the traditional concept of audience. Therefore, short video marketing needs to carry out content marketing and emotional marketing and use the movie's content to attract audiences. It is also necessary to cater to the users of the short video platform with the help of the star effect and user-generated content to create a three-dimensional marketing matrix.

The current research on short video marketing mainly focuses on analyzing the characteristics of short video platforms and specific movies and proposing corresponding marketing strategies, but it needs more feedback from platform users or movie audiences. At the same time, most existing studies include the UGC content of short video platforms and associated texts such as Douyin video special effects into the scope of short video marketing. Still, there needs to be more marketing research on the content characteristics and audiovisual language of short videos. The short video of movie marketing in this article refers to the short video marketing materials published by the official accounts related to the movie on the Douyin platform. Therefore, this study will explore the impact of short video content characteristics and audiovisual language on the marketing effect of the short video itself by studying the short video marketing materials released by the official movie account on the Douyin platform and provide more targeted marketing strategy suggestions for film marketers based on user feedback in in-depth interviews.

3. Method

3.1. Research Design

The study adopts qualitative analysis methods, analyzes representative short video marketing cases through case studies, combines in-depth interviews with short video marketing audiences, and deeply excavates its strategic characteristics and effects to provide targeted marketing suggestions for film marketers. Qualitative analysis can dig deep into the strategic characteristics and effects of short video

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marketing. At the same time, the combination of case studies and in-depth interviews can comprehensively understand the operation of short video marketing on the Douyin platform, providing in-depth insights and enlightenment for film marketing practice.

3.2. Data Collection

Surveys and interviews were used to collect primary data. In the investigation stage, the retweets, comments, likes, and box office content released by the official account of the “May Day” movie on the Douyin platform will be collected. From May 17, 2024 to May 24, 2024, the study used in-depth interviews to collect empirical data, and 15 individuals were selected to conduct interviews (as shown in Table 1), and semi-structured in-depth interviews ranging from 30 to 60 minutes were conducted on each individual. Interviews are divided into online interviews and face-to-face interviews. The content of the interview mainly focuses on the daily contact of short video marketing, which is divided into four parts: content richness, emotional expression, the comprehensibility of audiovisual language, and the degree of authenticity and credibility. After informing the interviewees and obtaining consent, the interview content is recorded and converted into text to form the final interview text material.

Table 1: A list of interviewees.

Interviewee	Gender	Age	Occupation	Method
A1	Male	16-20	Student	Telephone
A2	Male	16-20	Student	Face-to-face
A3	Female	21-25	Student	WeChat
A4	Female	21-25	Student	Face-to-face
A5	Female	21-25	Student	Face-to-face
A6	Female	21-25	Student	Face-to-face
A7	Female	21-25	Student	Face-to-face
A8	Female	21-25	Advertising	Face-to-face
A9	Male	26-30	Teacher	Face-to-face
A10	Female	26-30	Freelancer	Face-to-face
A11	Male	26-30	Advertising	Telephone
A12	Male	26-30	Doctor	WeChat
A13	Male	31-35	Practitioners in the film and television industry	WeChat
A14	Male	31-35	Practitioners in the film and television industry	WeChat
A15	Female	31-35	Professor	Face-to-face

3.3. Data Analysis

3.3.1. Content Richness

All respondents said that compared with traditional theatrical movie trailers, the short video marketing of movies showed higher content richness. The short video can provide more in-depth interview content with the main creative team (A7, A8, A9), more detailed offline roadshow records (A15, A13), and more comprehensive derivative promotional materials (A11, A14). Short film videos’ marketing and publicity methods are more diverse, and their content-carrying capacity is far greater than traditional media. However, short-form video marketing inevitably has spoilers when carrying too much movie-related content. In addition to releasing film materials such as story background, main creators, and image style on short video platforms, some films release key plots, climaxes, or important plot twists to attract users on short video platforms to watch the movie. Respondents said that the placement of these contents would reduce their expectations for movies (A2, A12), affect the

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viewing experience (A1, A3, A9), and even reduce their willingness to watch movies. During the promotion period of movies, different types of movies are affected differently by short video marketing. Suspense and horror films need to ensure a similar frequency of short video material release rhythm as other types of films in the same period, which is often difficult to meet marketing gimmicks and retain suspense (A12, A14). Respondents said that the short video marketing of movies is the same, lacking novelty and easily causing aesthetic fatigue among users of short video platforms (A5, A6).

3.3.2. Emotion Expression

With the development of the times, the age of the audience and the influx of new users, the main audience of the film market has undergone generational changes because the main audience of the film market is concentrated 18 - 35 years old now the post-90s and post-00s have become the main force of film consumption. According to the data in the “2023 Douyin Entertainment Report”, 62% of Douyin entertainment content consumption users are users under the age of 40. Douyin’s users show a significantly younger age. The user base faced by subdividing entertainment content is the highest in 24-30 years.

To meet the characteristics and needs of short video platform users and movie audiences, short video marketing focuses on emotional resonance with young people from hot topics on the Internet and other topics of interest to young people. Taking the content released by the official Douyin account of the “May Day” movie selected by the study as an example, the love movie “Moonstruck” released short video content with themes such as “Advice for Young People”, “Child Stars Reproducing Childhood Memories of the Post-00s”, and “Post-00s Love Concept”, focusing on the emotional needs and resonance of young audiences, with more than 1 million views of related short videos; The comedy and suspense movie “A Hotpot Can’t undo Nothing” released short video content with themes such as “Good Friends + Movies + Hot Pot” and “National Girls’ Unified Speech”, starting from topics such as young people’s dating circles and love views, with an average of about 500,000 views of related short videos.

Social issues such as educational equity, environmental pollution, gender equality, and peaceful development are major focus of short video marketing. The action movie “Formed Police Unit” focuses on overseas peacekeeping, focusing on the daily training, real experience and social evaluation of Chinese peacekeepers. The suspenseful crime movie “Hovering Blade” focuses more on the rule of law society and crime cases and carries out short video marketing around hot social issues such as juvenile crime and the clandestine photography industry, which arouses the public’s resonance and attention to social issues. However, some short video content in film marketing is keen to show the “emotional outbursts” and “high-energy clips” of the actors’ acting skills. These content fragments often emphasize the display of the actors’ momentary emotions but need more explanation of the cause and effect of the plot, making it difficult for the audience to understand and substitute (A5, A7).

3.3.3. Audio-Visual Language Comprehensibility

The original movie videos are long, and the horizontal screen playback format is unsuitable for mobile users’ viewing habits. Therefore, the film marketing party re-creates and edits the materials into vertical screen videos suitable for short video platforms. It also adds text and background music to gain users’ attention and likes, which converts them into movie-watching behaviors. The respondents said that the short video materials for movie marketing on the Douyin platform meet the audio-visual language characteristics of short videos, the viewing experience is smooth, and the picture impact is strong (A13, A14). To convey the relevant content of the film to users more clearly through short

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videos, short video materials related to the original movie often add brief text descriptions to supplement the explanations of the characters' expressions, movements, psychological activities, etc., in the picture. The respondents said this text information should be addressed when watching relevant short video materials (A5, A7, A14). Some respondents said that the short video materials related to the original movie should convey information by interpreting the characters in the picture, and the text descriptions appear redundant (A2, A4). At the same time, respondents indicated that Douyin hits that did not match the movie's tone and were too loud would make people disgust and avoid it, reducing their willingness to watch the movie (A8, A10).

3.3.4. Authenticity and Credibility

The star effect and the fan economy have been important factors in film marketing in recent years. Respondents said they would go to the movies because of the star lineup (A1, A2, A5) and participate in the private viewing activities of fans (A1, A2). In the short video marketing of movies, the film marketers will use the star effect during the promotion period and put many related star materials, such as acting clips, set highlights, interview content, roadshow speeches, etc. Although the star effect can play a role in converting movie-watching behavior, urgent problems need to be solved in specific delivery situations. First, to attract fans to watch the movie, some movies will put a large number of related materials as supporting roles or guest stars in short video marketing, which makes users misunderstand the proportion of the star's role in the movie and there is a suspicion of "fraudulent marketing" [7]. Respondents said that they had seen some movies on short video platforms that put related materials mainly about a certain star in the marketing and mistakenly thought that the star was the main character in the movie. Still, after watching the movie, they found that the star only appeared for five minutes (A2). In addition, the public often questions traffic stars about their acting skills and other professional abilities. Respondents said that emphasizing popular stars in the marketing process reduces the film's integrity (A12, A15) and causes audiences to worry about the quality of the film (A8, A13, A14). Respondents all expressed disgust and suspicion about content such as "audience reactions", "set highlights", and "star endorsements".

4. Conclusion

4.1. Content Richness

Compared with the trailer of the movie theater, the short video marketing content is richer in disseminating movie information, covering film tidbits, actor introductions, plot synopsis and other aspects. Short video marketing of movies attracts audiences in various content forms and enhances the exposure and attractiveness of movies. While providing sufficient video information, short video marketing needs to ensure timely leakage of video content. To attract the audience's attention and increase the advance box office, some film companies or producers may excessively display the film's key plot, climax or important plot turning points in the short video. Leaking too much content too early may make the audience already understand the film's plot before watching the movie and reduce the audience's expectations and curiosity. Audiences watching the film in advance with fragmented content such as plot, scenes, and character settings may need more exploration and immersion in the film. The premature leakage of the film's content may also lead to the audience's willingness to watch the movie because they know the content in advance, which will affect the movie's word-of-mouth and box office performance.

The official account of the movie releases the corresponding content before, during and after the release of the movie, forming a relatively complete short video marketing model. Standardized marketing processes lead to homogenization in short films. The homogenization of marketing makes short films lack innovation and uniqueness, and it is not easy to attract the attention and resonance of

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the audience, thus affecting the marketing effect and audience participation [8]. Secondly, homogeneous marketing content may lead to fatigue, reduce their expectations and interest in the movie, and affect their word-of-mouth and box office performance.

4.2. Emotion Expression

Short video film marketing is good at mobilizing users' emotions and triggering emotional resonance. Based on the characteristics of the users of the short video platform and the main audience groups of the movie, the short video marketing of the film carefully designs emotional content to arouse the resonance and emotional resonance of young audiences. At the same time, short video marketing not only focuses on the emotional needs of young audiences but also on connecting movies with social issues to enhance films' social influence and topicality. By exploring and presenting content related to social issues in short videos, the filmmaker aims to draw the audience's attention and think about social issues while adding a new dimension and depth to film marketing. Some intense negative emotional performances that lack context, such as screaming and pathos, may trigger the audience's avoidance behavior and reduce the willingness to watch the movie.

4.3. Audio-Visual Language Comprehensibility

Short videos are usually short, with a compact narrative structure and a fast pace, allowing viewers to quickly obtain information and emotional experience while meeting the audience's habits and needs for watching videos on mobile devices [9]. This study analyzes short video materials of movies from three aspects of audiovisual language: image, sound, and editing [10]. In terms of image, these short video materials are mostly cropped from the original film frame under the vertical screen waterfall flow presentation method of the short video platform, mainly focusing on close-ups, close-ups, and mid-shots of the characters. By highlighting the emotions and actions of the characters, the image characteristics of short videos further emphasize the dramatic tension of the plot. This method of cropping and close-ups allows the audience to focus more on the characters' expressions, actions, and emotional changes, thereby deepening the audience's understanding and resonance of the movie's plot. In terms of sound, short video materials often add sound effects to the original film and emphasize important plots. However, sometimes this emphasis may appear inappropriate or redundant, especially when using inappropriate Douyin hot songs. Short videos are secondary editing of the original film. Through fast picture switching and editing with a strong sense of rhythm, short videos can effectively convey the tension and suspense of the plot. However, being exposed to a large amount of short video materials before watching a movie will make the audience temporarily accustomed to fragmented, high-output, fast-paced audio-visual language, which will have a negative impact on the audience's viewing experience.

4.4. Authenticity and Credibility

Previous studies have confirmed that the star effect is important in marketing short videos for movies. With the development of social media, the scale and influence of the star fan group have continued to expand, and the fan economy has become an important force in increasing the early traffic and box office of movies. Traffic stars play an important role in marketing short videos for movies, and their casting clips, acting demonstrations, roadshows and other content have become important content to attract audiences. However, to attract more fans to convert into movie-watching behavior, some film companies may need to emphasize content related to traffic stars in short video marketing, including exaggerating the star's role or over-promoting a star rather than the movie as a whole. This situation may cause ordinary audiences to question the authenticity of the movie. Interviews found that audiences dislike exaggerated and posed content, and will question the authenticity of content such as “audience reactions”, “set highlights” and “star endorsements”.

5. Discussion

Based on previous research and market performance, this study suggests strategies and suggestions for marketing short video films. In terms of content richness, the highlights of the movie, behind-the-scenes footage and character relationships are displayed in short videos to stimulate the audience’s interest and curiosity while retaining the suspense of the original film to arouse the audience’s desire to explore and watch the movie. To achieve emotional marketing, combined with the current social hot topics, it is cleverly introduced into the short video marketing of the film, associated with the content of the movie, and arousing the audience’s resonance and discussion to enhance the social influence and topicality of the film, and achieve the win-win effect of short video marketing and social feedback. Based on the characteristics of audio-visual language and short video platform, when producing short videos, the audio-visual habits and language characteristics of short video platform users are combined to attract users’ attention and improve the effect of content dissemination while maintaining an organic connection with film content to ensure the effectiveness and authenticity of short video marketing. Considering the role of the star effect in promoting the box office of the movie, make full use of the influence and appeal of traffic stars to attract more fans’ attention and participation, to effectively divert the flow to the publicity and promotion of the movie, and at the same time avoid “fraudulent marketing”, excessive marketing leads to the audience’s doubts about the authenticity of the movie.

Combined with the intelligent algorithms and data analysis capabilities of short video platforms such as Douyin, the target audience group is accurately located. The personalized direction of short video marketing is selected according to the user’s interests, hobbies, behavioral characteristics and other information to avoid homogenization of marketing, accurately deliver short video content, improve the exposure and audience participation of the content, and achieve the purpose of precision marketing and effective promotion.

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Research on the Debt Levels of Firms in the Aviation Industry

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Abstract: Numerous reasons contribute to the liabilities of a firm in the aviation industry. As a capital-intensive industry, the aviation industry has long faced high liabilities caused by the cost of purchasing necessary means of production. Also, the industrial feature that the aviation business has in its off-season and peak season has brought uncertainty to the industry. In addition, it has also experienced increasing pressure due to the decreasing travel and transport demands during and after the COVID-19 pandemic. Considering the reasons above, the debt management ability of an airline has become more essential than before to investors. This research will compare and analyze the debt level of sample firms in the aviation industry, and provide a basic overview of the sample firms' business situation through utilizing a quantitative method and several indicators. The conclusion is that the differentiation in debt levels results from the differences in industrial features, firm situations, and operating and investment activities.

Keywords: Debt Level, Aviation Industry, Liability Management

1. Introduction

The development of an aviation firm relies heavily on its scale and sustainable market competitiveness, and these two factors are affected by its debt level to a large extent. Given that both infrastructure and aircraft cost a large amount of money, and it is impossible for airlines to afford expansion based solely on their operating profits, airlines have to rely on debts to operate. While this situation is long-lasting, other factors like global or geographical safety or health emergencies may also negatively influence the operation of airlines. Thus, maximizing the returns, which is the goal of an airline, will require appropriate debt management [1].

While debt management can ensure the firm has sufficient development funds, there are also non-negligible drawbacks in doing so, and, due to the potential risk debt management brings, these risks are more likely to be ignored. Managing risks and hazards, however, has always been essential to airlines [2]. Thus, a clear understanding of the debt level of the firm and efficient debt management is necessary.

This research aims to provide a more comprehensive view of the debt levels of airlines. From a theoretical perspective, this research, by way of analyzing and comparing the debt levels of airlines, will be able to point out the influences of liability composition on enterprise management, and thus contribute to providing a better way to tackle the existing issues.

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As part of the quantitative research, four indicators will be utilized to analyze eight firms of two industries. The four indicators are the debt-to-equity ratio, the liquidity ratio, the Net Debt, and the EBIT. Among the eight firms mentioned, four of which are competitors in the aviation industry and the other four in the manufacturing industry as a comparison to the precious four from an industrial perspective.

The D/E ratio measures the leverage and debt burden of a firm. Generally, a relatively low ratio will be beneficial to the firm since it may be difficult for a firm with a high D/E ratio to pay off existing debts and raise future capital. The quick ratio formula for calculation divides the liquid asset by its current liabilities. As an indicator of the overall financial strength of a firm, it also measures if the firm is capable of meeting its obligations with liquid assets. This research defines Net Debt as total debt minus cash and short-term investment. Also, the Net Debt/Market Cap and Total Liabilities/Market Cap ratios measure the ability to utilize the stock market to improve its liability composition on its balance sheet.

2. Aviation Industry Overview

Table 1: Sample firms selected for comparison.

Aviation (A)	Name of the Firm	Alaska Air Group	JetBlue Airways	Delta Air Lines	United Airlines
	Ticker symbol	ALK	JBLU	DAL	UAL
Manufacturing (B)	Name of the Firm	Caterpillar Inc	The Boeing Company	Paccar Inc	Cummins Inc
	Ticker symbol	CAT	BA	PCAR	CMI

DAL and UAL are service airlines with the largest market capitalization among listed companies in the aviation industry. ALK, while operating a business model between full-service and budget airlines, is running relatively well, and it is one of the first airlines to benefit from the economic comeback of medium scale. JBLU is a low-cost carrier. Having similar operating scales, these first two and the last two firms are considered appropriate samples for comparison.

In addition to the listed firms, four leading enterprises of the manufacturing industry (see Table 1) will be analyzed as a representation of the large-scale manufacturers that also have high debt levels like airlines.

There are two reasons that render the debt problems of aviation firms noteworthy. On one hand, as a capital-intensive industry, aviation firms have the feature of high liability ratio. On the other hand, the aviation industry has suffered from the COVID-19 pandemic, and, considering certain data, it has not recovered yet.

While having to purchase planes, fuel, hangars, and other means of production, it is not surprising that airlines have some of the highest D/E ratios. The escalation in the jet oil price has also contributed to huge losses for airlines [3]. Also, as a service industry that gets into debt before generating income, aviation firms face the pressure to create sustainable revenue to pay off previous debts. Aircraft purchases and renewals are usually financed by profits in previous years [4]. In addition, the seasonality of the aviation business may bring uncertainty, causing the cash flows of the companies to fluctuate.

The COVID-19 pandemic has caused unprecedented impacts on the aviation industry [5]. Along with the implementation of travel restrictions in various regions and the decrease in travel demand, airlines have suffered a severe crisis. Even though idling ships can decrease operating costs, the

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withdrawn capacity will still cause a huge loss in revenue for carriers [6]. Furthermore, the generation of a recovery plan for the aviation industry is also complex, requiring accurate re-planning of resources [7].

To mitigate the negative impacts mentioned above, airlines have to borrow money. The newly increased debt will inevitably bring more operating burden to the airlines. Also, a change in debt structure is likely to increase the risks firms are taking [8]. Even if travel demand experienced a comeback along with the economy, and airlines are operating at an efficient level, there is still to need for an accurate plan to deal with the debts.

3. Comparative Analysis

3.1. Comparison in Short-Term Debt Paying Ability

While some firms having huge debts also have sufficient high-liquidity assets, these firms do not have difficulties paying off short-term debts. These assets include cash, flexibly-traded investment products, short-term receivables, and others. Thus, a comparison in liquidity ratios is necessary.

Table 2: Quick ratios of the four firms selected.

Companies	Alaska Air Group	JetBlue Airways	Delta Air Lines	United Airlines
2023-12-31	0.58	0.57	0.34	0.76
2022-12-31	0.65	0.49	0.45	0.95
2021-12-31	0.97	0.93	0.71	1.14
2020-12-31	0.92	1.22	1.05	1.09
Average	0.78	0.80	0.64	0.98

Table 2 above shows the quick ratios of the four firms selected. The status of the four airlines is not optimistic, despite the decreasing impact of the pandemic. Between 2020 and 2023, the quick ratios of the airlines all experiences a drastic decline regardless of their operating scale or debt size. Among them, DAL even slipped to the brink of a short-term payment crisis. This situation suggests that the aviation industry has experienced a decline in solvency and does not show a tendency to recover.

3.2. Comparison in the Ability to Covering Debts Through Operating Activities

The net-debt-to-EBIT ratio and the EBIT cover interest expense will be utilized to analyze the debt levels relative to the earnings of each airline, comparing the ability to cover debts through operating activities.

Table 3: Net-debt-to-EBIT ratios of the four firms selected.

Companies	Alaska Air Group	JetBlue Airways	Delta Air Lines	United Airlines
2023-12-31	4.87	-30.78	3.81	4.27
2022-12-31	7.90	-11.03	8.55	8.60
2021-12-31	1.30	-27.59	14.58	-14.61
2020-12-31	-0.98	-1.56	-1.46	-1.09
Average	3.27	-17.7	6.37	-0.71

Table 3 above shows the net-debt-to-EBIT ratio of the four selected firms. While that of JetBlue Airways remains negative for four years, losing its capability to improve liability composition by

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operating. This may be a result of the business model of the firm, which is operating as a budget airline, and still, there are no signs of future improvement. However, the other firms have experienced an increase in their net-debt-to-EBIT ratio, implying an increasing profitability. If they remain on the trend, the firms may form a relatively reasonable coverage of debts in the following one to two years.

Nevertheless, considering the escalating tension of international geopolitics, and other emergent factors, airlines may still face potential risks in the future despite the recovery of the aviation industry. The EBIT covers interest expenses and can provide information on the firm's ability to cope with the potential debt crisis.

Table 4: EBIT-to-interest expense ratios of the four firms selected.

Companies	Alaska Air Group	JetBlue Airways	Delta Air Lines	United Airlines
2023-12-31	4.44	-0.59	7.72	2.91
2022-12-31	1.84	-1.63	2.86	1.59
2021-12-31	6.38	-0.37	1.31	-0.62
2020-12-31	-20.15	-9.58	-15.78	-7.89

Out of the same reasons mentioned above, the ratios of JetBlue Airways lose significance in comparison, as Table 4 shown. In an overall view, the airlines all experienced an improvement after the pandemic, and their Ebit covers interest expenses are at a healthy level. Specifically, Delta Air Lines has shown a strong ability to pay off interest as one of the leading airlines in the industry.

3.3. Comparison in the Ability of Covering Debts Through Investing Activities

For a company with a reasonable amount of debt and sufficient short-term solvency, the free cash flow generated by EBIT can repay the debt, which is the best situation in the interests of shareholders and creditors. However, when the free cash flow is unable to cover the debts, issuing new shares and financing are ways to tackle to problem.

Pricing new shares is especially critical: a high price is beneficial for shareholders, while a low price will dilute the shareholders' equity. In addition, a firm without sufficient cash reserves may become illiquid [9]. If a debt crisis occurs, and the price of the firm's shares has declined to the extremely low level, the firm will face bankruptcy for being unable to issue new shares. Net Debt/Market Capitalization and Total Liabilities/Market Capitalization will be utilized to compare the abilities of companies to cover debt through investing activities. The former can reflect the debt pressure the company is facing and the latter can reveal the scale of the company's balance sheet.

Table 5: Net debt-to-market capitalization ratios of the four firms selected.

Companies	Alaska Air Group	JetBlue Airways	Delta Air Lines	United Airlines
Market Cap (24-5-12)	$5,553	$1,963	$33,943	$17,335
Net Debt (23-12-31)	$2,030	$3,817	$24,512	$22,021
Total Liabilities	$10,500	$10,516	$62,539	$61,780
Net Debt/Market Cap	37%	194%	72%	127%
Total Liabilities/Market Cap	189%	536%	184%	356%

As shown in Table 5, the four airlines all have high Net Debt/Market Cap ratios. JBLU and UAL's net debts are larger than market capitalization, which places the two companies in a high-risk situation; those of DAL and ALK are also relatively high. Similarly, JBLU and UAL have extremely high total liabilities/ market capitalization ratios, and those of ALK and DAL are relatively lower, implying that airlines still have not recovered from the financial distress caused by the COVID-19 pandemic.

3.4. Comparison with the Manufacturing Industry

The aviation industry and the manufacturing industry are both heavy-asset industries, which indicates that firms in these two industries may both have high debt levels. Take Alaska Air Group (ALK) for example. As a company of medium scale, the Short-term Debt/Current Portion of Long-term Debt on its balance sheet was $353 million by the end of 2023, and the Long-term Debt is $2.18 billion. Conversely, those of The Boeing Company (BA), one of the leading enterprises in the manufacturing industry, are much higher, at a level of $5.2 billion and $47.1 billion.

In addition, manufacturing businesses require a large amount of long-term capital for further financial performance improvement, which is similar to the aviation industry [10]. While these two companies have the possibility to be exceptions, comparing two groups of companies of different scales may render more accurate conclusions.

Table 6: Comparison of D/E ratios.

	A Group				B Group			
Symbol	ALK	JBLU	DAL	UAL	BA	CAT	PCAR	CMI
2023-12-31	2.55	3.15	5.63	6.63	-8.95	3.49	1.57	2.62
2022-12-31	2.72	2.66	9.98	8.77	-9.63	4.16	1.53	2.35
2021-12-31	2.67	2.54	17.64	12.56	-10.24	4.02	1.55	1.87
2020-12-31	3.70	2.39	45.93	8.99	-9.31	4.11	1.72	1.81
Average	2.91	2.69	19.80	9.24	-9.53	3.95	1.59	2.16

Table 6 shows a horizontal comparison of the D/E ratio between eight companies and a vertical comparison of each company in the past four years, which are both factors used to compare their debt scale. A group includes four aviation companies and B group includes four manufacturing companies.

While BA has had a continuous negative equity and D/E ratio in the past four years, it is obvious that it is suffering from a financial anomaly, and its ratios lose the significance of discussion. Still, looking at the table, DAL, and UAL, as full-service airlines, have an extremely high debt level compared with the other firms selected. This situation has not recovered until the end of 2023, and thus it is unlikely that they will experience a recovery in 2024. Conversely, ALK and JBLU have fared relatively better in debt, implying that medium-scale firms may be better at recovering from the recession during the pandemic than larger carriers such as UAL and DAL.

In addition, comparing the two groups, firms in the manufacturing industry have a lower average D/E ratio than those of the aviation industry, which can be interpreted as heavy manufacturing industries like machinery have recovered better from the pandemic.

4. Conclusion

Based on the findings above, this research has the following conclusions: Firstly, debt levels are associated with the situation of certain industries. Considering the capital intensiveness and uncertainty of the aviation industry, it is normal for airlines to have relatively high debt levels.

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Secondly, the aviation industry has suffered more damage than other heavy-asset industries like manufacturing during and after the pandemic. Its total liability level remains high, and its operation still faces uncertainty. Thirdly, differentiation is revealed through the different debt levels of the selected airlines. Though low short-term debt-paying ability is prevalent in aviation firms, the difference in operating situation indicates differences in profitability and the ability to cover debts through investing activities.

The following shortcomings exist in this research: Firstly, the sample size selected in this study is too small to cover the entire air transport industry; thus, there may be a few reasons that contribute to the existing situation but are neglected. Secondly, the indicators selected in this study are too few to make a complete and comprehensive analysis of the firms selected; thus, the conclusion of this research may not be objective enough.

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Optimizing Influencer Marketing Strategies in the Beauty Industry: Case Analysis

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Abstract: As social media platforms have matured, influencer marketing has increasingly gained favor among advertisers. This study explores the optimization strategies for influencer marketing in the beauty industry. Through case analysis and previous research experiences, it is recommended that suitable influencers for different brands and products be selected. The findings indicate that influencer marketing significantly enhances brand awareness and consumer trust. However, brands need to make precise selections based on target customer groups, brand image and story, and influencer types. The three key factors proposed in this study—target customer groups, brand value and story, and creator types—offer specific brand guidance when choosing influencers. By optimizing influencer selection strategies, beauty brands can build their brand image more effectively and improve market competitiveness. The conclusions emphasize that influencer marketing should become a necessary promotional tool for beauty products. The study also highlights future research directions, including applying these strategies in other industries and more systematic data research.

Keywords: Influencer Marketing, Beauty Industry, Social Media, Brand Strategy

1. Introduction

These days, influencer marketing has risen with the maturity of social media platforms, such as Instagram, YouTube, and TikTok, increasingly favored by advertisers [1]. Influencers have plenty of followers or fans on social media platforms. They affect their followers' thoughts, preferences and purchasing behaviors [2, 3]. Beauty industry entrepreneurs notice that influencers have become one of the key influence factors on consumer decisions and have collaborated with them. The application and effectiveness of influencer marketing have been widely studied in various aspects of the beauty industry, including the main advantages of influencer marketing, factors influencing consumer decisions in influencers, marketing risk and so on [4, 5]. Some scholars explored the scope, effectiveness, and potential threats of influencer marketing [6]. Some confirmed the link between influencer marketing and consumers' purchase decisions, especially in Generation "Z" through surveys and samples [7]. Elias Davidsson and Danial Ahmad's research also focuses on finding the right influencer, but it focuses more on influencers' relevance and credibility with the brand [8].

However, there is a lack of studies focusing on influencer selection based on different brands and products and targeting consumers' preferences in the beauty industry. This study will be based on relevant case analyses and combined with previous experiences to provide more perspectives and suggestions for beauty industry brands on selecting influencers to achieve maximum marketing

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efficiency. The findings of this research will provide insights for businesses in the beauty industry and contribute to the existing body of knowledge on influencer marketing.

2. Case Description

The beauty industry is an absolute beneficiary of the development of influencer marketing. Recently, many beauty brands have become more visible through social media. However, the shift from traditional advertising marketing to influencer marketing still needs to be familiar to some advertisers. The beauty industry covers many categories, including skincare, cosmetics, personal care, medical cosmetology, etc. Common Thread Collective's statistics show that the beauty industry's market growth kept at 2.4-2.6% every year from 2012 to 2023, breaking the 90-billion-dollar mark in 2023. Beauty is also one of the most highly engaged industries in influencer marketing because social media, such as Instagram and TikTok, provide excellent conditions for posting visual content to fashion influencers. Many brands, big or not, have already become successful cases of influencer marketing. Maybelline collaborated with Gigi Hadid and Shayla Mitchell, significantly expanding its market influence and beating its parent company, L'Oréal and competitors, including Estee Lauder and Revlon, for cross-platform partnerships. Chinese niche brand Flortte rose on the TikTok e-commerce platform by partnering with many medium influencers. However, there are still many ineffective influencer ads that still follow the traditional mode of display ads. Most beauty-focused social media accounts seldom have a clear strategic positioning, making it difficult to produce differentiated content [9]. This led to a dilution of audience attention in the age of fast-scrolling media. Also, marketing commercialization has imbued beauty self-media with a utilitarian consumer hue, building an untrustworthy brand image [10]. Factor analysis and suggestions concerning influencer choice will be given to tackle these problems.

3. Factors analysis

Three main factors are worth considering when an advertiser wants to choose an efficient influencer. They are target customer groups, brand value or stories, and creator types.

3.1. Targeted Customer Group and Product Type

Perspectives, including genders, ages, habits, income, identities and interests, can estimate target customer groups. Women aged 16 to 65 are the main consumers of the beauty industry. However, different age groups have different consumption preferences. Middle-aged women who have some financial ability will accept expensive ingredients and anti-aging effects. Similarly, anti-acne products are more suitable for students. Makeup with strong retention and air permeability can better meet the needs of women in the workplace. The purpose of the influencer is to help the brand display typical stories of customers and typical scenes to touch the empathy points. In this respect, media platforms should also be considered since different posting forms and forums attract different users, who will be branded as potential customers.

3.2. Brand Image, Value and Story

The overlap and identity of brand image, value or story of influencers are also important. For well-known big brands and distinctive small brands, they are indispensable conditions. When influencers truly identify and love the products they promote, their recommendations are more convincing and credible since they are giving positive feedback as real users. The overlap of influencers can strengthen the value of a brand or build the image quickly. Pehchaolin is a centuries-old Shanghai skincare brand in China that combines traditional Oriental aesthetics with modern technology. Its

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cooperated influencer is actress Zhilei Xin, who plays the role of a charming Asian woman in a hit TV series Blossoms Shanghai. This image harmonizes with Pehchaolin's native cultural inheritance of old Shanghai.

3.3. Creator Type

Creator type is a vital factor in brands' choices as well. Beauty content creators can be classified into five types: tutorial-oriented, persona-driven, review-focused, lifestyle-oriented, and academic-oriented. Tutorial-oriented creators focus on teaching and technique sharing, such as makeup tutorials, product application methods, etc. The replicability of the content is a key reason viewers favor the tutorial-oriented faction. Viewers can achieve expected results akin to those in videos or photos by directly replicating the beauty products used by tutorial-oriented influencers. Following tutorial-oriented creators can also help viewers stay up-to-date with trends. They achieve marketing and sales by predicting and leading trends. Persona-driven ones emphasize artistic flair, creativity, or unique persona style and memorable characteristics. Personalization and emotional connection are the main advantages of persona-driven creators. They give followers a sense of belonging and identity, often resulting in a dedicated fan base. Review-focused ones primarily center around evaluating and comparing various beauty products and providing purchasing recommendations for the audience. Review-focused creators convey a sense of experience and neutrality, often employing a professional evaluation process and methodology. They offer convenience and facilitate comparison shopping for viewers. Lifestyle-oriented ones integrate beauty with everyday life, fashion, travel, and other related content. Lifestyle-oriented creators typically are not pure beauty influencers; their followers identify with their lifestyle and values. So, they are also called LOHAS. Using the same products as them helps fans feel closer to the ideal lifestyle. Collaborations between brands and lifestyle-oriented creators tend to show product applications in real-life scenarios and promote a healthy lifestyle ethos. Academic-oriented ones possess backgrounds in medicine, scientific research, or professional fields, offering purchasing advice to audiences from an objective perspective. They are regarded as professional and authoritative and usually provide detailed data and analysis to enhance audiences' trust.

4. Suggestions

In light of the analysis of these several reasons, this article will propose some suggestions and solutions, respectively.

4.1. Identifying Targeted Customer Groups

Determining the targeted customer group of products can help to hunt influencers. Ideal influencers should have the highest overlap in fan groups or be in line with the brand customer group image, especially for those newly established companies with limited budgets. But how to determine followers' properties? It is possible to determine genders, ages, habits or interests by using the function of products. Research on the construction of user portraits on Weibo shows that users of different ages and genders exhibit differences in emotional expression, which leads to different needs and preferences for emotional expression from influencers [11]. In other words, influencers are more likely to impact audiences of similar age groups or genders. Also, special interests and living habits provide application scenarios. For example, people who demand sunscreen typically engage in outdoor activities. In this case, influencers who show sports lifestyles will be more suitable. Similarly, people who engage in frequent social activities tend to have a higher demand for cosmetics. Fashion bloggers are more likely to attract them. Income level is another perspective worth considering because it directly relates to brand level. The student group is an easily identifiable low-income group.

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Based on these predictions, brands should first do market research or social media data analysis to identify customer profiles.

4.2. Selecting the Right Influencers

Choosing the right influencers can make brand image building much more efficient. Big-name brands usually collaborate with celebrities or stars rather than normal influencers on social media since they do not need to build brand awareness with a long-tail effect. What they need are attractiveness and higher market positioning. In comparison, niche brands need more impressions and trustworthiness. They can achieve this goal by telling brand story and faith. In this case, influencers who are good at storytelling can be excellent choices. Characteristic brands prefer influencers with similar images. These typical styles are widely loved by their fans, and it is easier to allow their fans to love everything associated with them. This action can also inform potential customers that “I will be the style you like”. No matter what kind of brand, it is important to reach a consensus with influencers on brand value. So, advertisers need to put more effort into communication to ensure they convey accurate ideas. Based on this, allowing influencers to express their genuine thoughts freely may yield better marketing results. They can give feedback on two sides, but these disadvantages should never concern product efficacy or safety. For example, a shortage of packaging and temporary side effects are harmless.

4.3. Matching Influencer Types with Brand Needs

The choice of influencer type also requires careful consideration. For personality brands, tutorial- and lifestyle-oriented influencers are perfect collaborators to present brand charm. With "Oriental Makeup" as its entry point, Florasis has become the top makeup brand in China in just four years. The first shot in which Florasis established its brand reputation was in the live broadcast room of top anchor Li Jiaqi, one of the top-tier anchors in China. The main marketing method that he used was cosmetic teaching. Besides, the collaboration with lifestyle-oriented influencers has the same theory as the image shaping of characteristic brands. So, why not incorporate distinctively personalized products into a lifestyle of the same style? Brands specializing in certain fields or functions tend to collaborate with academic-oriented and review-focused influencers. These products win through strength, involving multiple areas such as makeup, skincare, sun protection, and more. The specific type of influencers they target depends on the situation. That leaves persona-driven influencers unspecified. As analyzed above, this kind of influencer has both a group of loyal fans and a creative capacity. These conditions allow them to adapt to various marketing products. These suggestions are proposed based on the abovementioned factors, delineated into three levels. When referencing, it's important to consider a comprehensive view.

5. Conclusion

In conclusion, this research proposes three common factors that advertisers should consider and provides suggestions to optimize the use of social media influencers for branding purposes. This study argues that, Firstly, brands should identify their target customer groups to find the most suitable influencers. Secondly, choosing the right influencers can make brand image building more efficient, with major brands often collaborating with celebrities, while niche brands should select influencers who excel in storytelling. Finally, different types of influencers suit various brand strategies: personality-driven brands can partner with tutorial-oriented or lifestyle-oriented influencers. In contrast, brands focused on specific fields should collaborate with academic-oriented or review-focused influencers.

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Influencer marketing is a new and competitive track based on fast market trend transformation and consumption habits of the younger generation. Unlike traditional advertising and spokesperson marketing, it builds a more trustworthy relationship between brands and consumers. Therefore, influencer marketing ought to become a necessary promotion for most products.

This article still has some limitations, and it calls for more exploration and research in the future. The article only analyses influencer choice in the beauty industry, while this kind of marketing is also popular in many other industries, such as tourism, fitness, and electronics. In addition, this article needed to conduct more data research; the data mentioned in the text is all based on existing literature in the last few years. Besides, only general conclusions are provided, and the special circumstances of each advertiser cannot be considered. In the next step, the writer will focus on marketing surveys and more case collection and create a systematic mode to assist decisions directly. This methodology can also be applied to other industries needing further exploration.

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The Role of Digital Finance and Financial Inclusion in Economic Growth

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Abstract: Digital finance and financial inclusion have already become significant components of many countries' financial system. Starting from the early 21th century, the researchers focus on building the developed digital finance and financial inclusion system. This paper concludes the development of digital finance and financial inclusion and then summarizes the three significant effects on small, micro enterprises and common residents according to the existing study, emphasizing the importance of the digital finance and financial inclusion to economic growth. The impacts include that digital finance can increase the efficiency of financial market by improving the success rate of two-way selection of both parties in the financial market, in addition to increasing the consumption quality of residents. This paper also points out that digital finance and financial inclusion will bring new risks to the financial market, and subsequent researchers still need to study how to make digital finance more stable and less risky.

Keywords: Digital Finance, Financial Inclusion, Economic Growth

1. Introduction

Now digital finance and financial inclusion have become a new increase point around the world and received great attention. Starting form 2008, the World bank reported that financial inclusion is important, so the focus of poverty alleviation financing has shifted from microfinance to financial inclusion. From them on, the development of financial inclusion was accelerated [1]. China is a good example of applying digital finance and financial inclusion to gain economic growth. In 2015, the Chinese government initiated 'The Plan for Promoting the Development of Inclusive Finance', which enhance the economic growth in China. China now possesses an advanced digital financial system and a large scale online financial market. Chinese government also helped the financial institution to make their product become more common among ordinary people [2]. A remarkable achievement in China is the Alipay. With the Alipay, Chinese people could not only pay on their mobile phone, but also they have easy access to the fund. Some of financial products can be directly bought through Alipay. That means every mobile phone user who is qualified to the financial market can have a more convenient way to commit the transaction and only a few taps on the phone are needed to enter this market. China plays a world leading role in building a well-quipped digital financial system to guarantee the financial inclusion and make it become the power of economic growth. Therefore. It is important to figure out the development of the digital finance and financial inclusion in this digital era. An example of a British company can also stress the importance. Funding Circle, a British online

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lending institution, which was established in 2010 and focuses on small and micro groups, has expanded from Britain to the United States in the past eight years, and has served 5 billion euros of small and micro loan demand, while in the first six months of 2018, it has served a total of 1 billion euros of small and micro loan demand. This is the first online lending institution listed in the UK [3]. Hence, the digital financial inclusion could meet the immense demand of the ordinary financial users. Besides, the cost for those people is usually high in the traditional financial market due to their tiny trading volume and the lack of the information. Traditional financial market could not contain enough resources to provide services to satisfy all the users, but with digital financial system, people can get to the products in a low-cost way and gain more information of the market.

2. The Development of Digital Finance and Financial Inclusion

Digital finance can be traced back to early 2000 but until the 2010s it became prominent and developed fast. It firstly prevailed among the developed countries that want to build system to improve the efficiency of the financial transactions, payment and so on. For the developing counties, they focus more on applying digital finance on financial inclusion, enhancing the financial system penetration on ordinary people [4]. During the decade of 2010s, the digital technology had achieved a great success, which boost the advance of the digital finance. Each country manages to design a system to access more accounts in their country and those digital giant companies also try to expand their influence on common people by developing an APP that can sell their products to more people. Now there are also some debates about the digital finance. The opponents argue that the digital system increase the risks of the financial market. A typical negative example is P2P, an online lending platform in China. At first, P2P could really solve the problem of lack of financing channels for investors in China to a great extent. However, when developed larger, due to the lack of supervision and information asymmetry, many vicious incidents continued to be staged, which eventually led to the collapse of P2P, resulting in a lot of financial losses.

Therefore, what the digital finance and financial inclusion are is important. Digital finance refers to the combination of information technology and traditional financial business. Digital finance includes internet payment, mobile payment, online banking, financial service outsourcing and online loans, online insurance, online funds and other financial services. Digital technology makes it possible for financial institutions to transfer their services online. Alipay and WeChat is an advanced digital financial system. Users could finish transactions through mobile phones without leaving home. Financial inclusion refers to allowing common family and micro-, small and medium-sized businesses have easy access to the financial services and products. Financial inclusion can serve as a bridge between the cash and the demand of those who cannot compare to big companies [5].

A research on MENA countries figured out some relationship between the digital finance and financial inclusion. Obviously, digital finance can increase the availability of people to financial inclusion. For deep reasons, digital finance technology can increase the awareness of finance, improve the digital infrastructure of digital services of finance [6]. People that have not learnt the financial knowledge usually do not know operate their cash and how to borrow to make investment. The digital finance technology can provide them with information of finance market and help them make decisions so that more people and cash can be included into the whole financial system, which pushes the economic growth. Besides, the inclusiveness is an essential factor that can promote the development of the digital finance in turn. To access to different types of common people, financial institutions should continue design new products and upgrade their system to expand their market shares and maintain their profit.

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3. The Impact of Digital Inclusive Finance on Small and Micro Enterprises

Digital financial inclusion is designed for the demand of the micro enterprises that have difficulties in raising money competing with the big companies. Therefore, one of the significant influences is solving the trouble of loan. There will be two mismatches in credit rationing. The first is that among all the applicants who apply for loans, only some applicants can get loans, and even if the remaining lenders can apply at a higher borrowing cost, they can't get loans. The second situation is that the loan applicant does not meet all the credit conditions and can only obtain part of the loan. Besides, loan providers, financial institutions like banks, will consider moral risks. The cost for banks to collect and recognize the information of the small companies is high. The moral level and profitability of small and micro enterprises cannot be guaranteed, which is not conducive to the bank's pre-investigation and post-supervision of these enterprises. Hence, banks tend to increase the conditions for the micro enterprises, which will decline the demand of those companies. Considering the above factors, small companies and the banks both can meet each other's need. Digital financial inclusion technology can increase the efficiency of the interchange of information. Through the online platform, banks can reveal their products and approve the qualification of the micro enterprises. Additionally, applying the digital technology can explore the potential demand of the enterprises. That is, under the new credit algorithm and evaluation model, the relationship between banks and enterprises can be quantified, the relationship loan technology can be reshaped, and the hidden demand and potential demand of credit for small and micro enterprises can be tapped [7].

On the other hand, the digital financial inclusion is a new competing point for banks. It pushes banks to combine their traditional services with the digital technology. This connection helps banks to better screen customers and provide customers with different loan needs in a more personalized way. At the same time, this technology can reduce the cost of banks on the supply side and make banks more willing to provide loans to small and micro enterprises. Taking China's data as an example, by the end of the August of 2023, the balance of loans for small and micro enterprises was 67.7 trillion yuan, and the balance of agricultural loans was 55.0 trillion yuan. Among them, the loan balance of Pratt & Whitney small and micro enterprises was 27.4 trillion yuan, with an average annual growth rate of about 25% in the past five years [8]. The convenience of loan helps those small and micro enterprises tide over the difficulties, especially during the epidemic. At the isolation time, China's real economy has been hit hard, especially for small and micro enterprises. Many enterprises are short of funds, and it is difficult to obtain financing offline. The developed digital financial system in China has relieved the pressure of small and micro enterprises to a great extent and helped them to survive the epidemic period. Therefore, digital financial inclusion could promote the growth of the micro enterprises through providing them available fund so that they can also be important parts of the whole country's economic system. In turn, financial institution can also benefit from the application of digital technology. With the efficiency of dealing with the quantities of data, financial institution can cut down their operation cost and This makes the funds in the financial market more liquid and more reasonably used. Then the financial market continues to grow.

4. The Risks of Digital Inclusive Finance

Risks are always the significant factors in the financial market. Though digital financial inclusion brings new growth point for finance, it also increases the uncertainty in this market. Digital technology is a new technology. Until now, this technology can be called a relatively mature technology in the society, but people still can't say that they have completely mastered this technology. Technicians still spend a lot of resources and energy on maintaining the stability of digital technology. Coupled with the financial market with great risks, the emergence of digital finance also brings new risks.

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Firstly, Digital technology dependence algorithm which is in the hand of big companies or those large financial institutions. Therefore, common users cannot learn about logic relationship between the products online. What they can do is to accept the provided products. From the operating mechanism of the digital financial platform, when the platform receives external instructions, it performs operations through the middle operation layer, and finally outputs a scheme to the user. What is not known to users in the middle layer is called the algorithm black box [9]. The risk also comes from this black box. The first is mortal risk. The black box can collect the information unilaterally, and with machine learning technology, the preference and even the investment pattern can be recorded and recognized. Big financial institution can take advantage of these information to make targeted plans or products to occupy a favorable position in the industry, resulting in an unequal situation between companies and micro users. Additionally, the algorithm is not perfect, especially in the financial market with many uncertain factors, a set of quantitative algorithms cannot meet people's requirements well. For example, the situation of small and micro users is usually different. The algorithm can only divide these people into several categories and give similar investment advice, but can't give personalized advice, which brings risks to both investors.

Another risk comes from the convenience of the digital finance. Digital technology simplifies the operation of financial activity. Therefore, financial institution can combine some different products on their online platform. That means a new product is based on several financial tools. In this case, there will be overlap in financial services. If the correlation between financial services and products is too large, it will increase the complexity of financial network, and local market risks will cause risk resonance through financial network, which will aggravate systemic financial risks. Alipay is a comprehensive financial platform. It can provide such as loan, insurance, fund services simultaneously. Once Alipay faces risks, the different area of that it serves could face the same trouble.

The emergence of digital financial platform will bring competitive pressure to the traditional banking industry. As it is discussed above, the convenience of digital finance can make different financial services possible. In this way, financial institutions can also provide loan business. The direct competition between bank deposit business and digital finance business forces the marketization of bank debt interest rate, raises its interest payment cost, reduces the bank's net interest margin, and intensifies the bank's risk taking [10]. Banks have to introduce higher-risk products to attract customers. Besides, they also have to expand their services to hedge the losses caused by the reduction of traditional business, leading to the increase of the cost and uncertainty in bank industry. Then, the rise of the risk of bank industry will lead to turmoil in the entire financial system.

Hence, the risks of digital finance also need to be controlled. The essence step is to maintain the stability of algorithm and limit the application of digital technology to protect the traditional industry until it reaches the balance point where digital finance develops fast and traditional financial services work well at the same time.

5. The Enhancement of Consumption Through Digital Inclusive Finance

For common residents, except for the loan, consumption could also be a vital factor for the national economic growth. Digital financial inclusion could improve the quality of consumption. Firstly, the appearance of digital finance changes the way of consumption. The most remarkable achievement is mobile payment technology. In this respect, Alipay is still a good example. The payment process of Alipay is more simplified than using bank cards, and the money in Alipay is more liquid. In countries with developed mobile payment technology, such as China, the money in Alipay is even more practical than paper money. In addition, Alipay can provide online payment, making physical delivery in different places and online virtual product delivery easier, which has promoted residents' consumption. The second important role of promoting consumption of digital finance is that it provides simpler and more various payment choice. In other words, digital financial inclusion has

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improved the consumption quality of residents at the level of consumption by changing their consumption patterns [11]. In order to meet the needs of ordinary residents' intertemporal consumption and make better consumption decisions, some digital financial platforms provide products similar to loans. For example, Jing Dong, one of the largest e-commerce platforms in China, can provide "Jing Dong White Slip" service, or customers can choose to pay in installments that meet their own needs, divided into March and January. All these meet the consumption needs of different residents individually and promote consumption. The third point is digital finance could promote the centralized allocation of resources. With big data and machine learning technology, resources can be transported to where they are needed more efficiently. E-commercial platform could gather the users' preference and sell them what they might like. This not only avoids the waste of time caused by residents in selecting goods, but also allows businesses to get in touch with their potential customers more directly, so that the transaction rate of commodity transactions will be greatly improved, thus increasing consumption. Besides, the well-developed digital finance system increases the demand of consumption, which in turn requires the state to improve the relevant infrastructure related to online consumption. In order to match these consumer demands, the state will improve the development of logistics industry, highways, railways and other infrastructure. At the same time, in order to match the huge consumer demand, the e-commerce platform will also improve the platform construction, broaden residents' consumption channels and increase consumption. This is a virtuous circle process. Finally, at the level of consumption and supply, digital finance offers new products for consumption. The financial institution would aim at the individual demand of residents, applying the machine learning technology, designing unique products for users. On the one hand, it reduces the risk of information asymmetry, on the other hand, it meets the diversified and personalized needs of residents, which greatly increases their willingness to consume.

6. Conclusion

Digital financial technology and financial inclusion have already developed well and they are important for accelerating economic development. From the beginning of the 21st century to the present, many countries have established their own digital financial systems, and many financial institutions have also combined digital finance with their traditional financial services. These developments and changes have a great impact on small and medium-sized enterprises and residents. The investment needs of these individuals have been met. Through digital financial technology, the data of small and micro users are collected uniformly, and after digital technology processing, the personalized problems of these users are solved. At the same time, the increase of investment demand in turn promotes the development of financial market. The efficiency of the market is enhanced by the two-way supply of information. Small and micro enterprises and common residents could learn more about what they purchase in the financial market and those big financial products providers could also analyze the users easily, which cuts down the cost of operating and shifts the capital to more needed area. This paper concludes the development of digital finance and financial inclusion, emphasis the significance of them and analyze the influence to small and micro enterprises and common residents from three aspects, giving a whole view of how they work in the financial system to promote the economic growth. However, digital financial inclusion still has some risks according to the analysis above. In the future, In the future, researchers still need to explore how to control the risks brought by digital technology, maintain the stability of digital finance platform, minimize the negative impact of digital finance, further reduce the entry threshold of users, and improve their confidence in digital finance, so that digital finance can better drive the development of financial markets.

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Expanding the Profitability Model of a Sports Agency Based on Win-win Interaction: The Case of Klutch Sports

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Abstract: As the sports industry continues to grow, there is an increasing demand for the brokerage industry in the sports sector. Klutch Sports, an American professional sports agency, has grown rapidly since its creation in 2012, and boasts a number of big-name players, including Rich Pual, the company's founder. Rich Pual is the founder of Klutch Sports, which has negotiated more than $1 billion in contracts by signing more and more players to high-dollar deals. In July 2019, Unite Talent Agency (UTA) announced the acquisition of part of Klutch Sports and the appointment of Rich Paul is responsible for running the sports division. Through the outstanding ability of the leader and absorbing business talent to form an experienced team to provide players with the company's characteristics of the full range of services, so Klutch Sports has maintained a good momentum of development, from a small company gradually become a strong sports brokerage company. Its operation and development of the company is worth studying and learning from. Klutch Sports agency is used as an example for this study to provide professional sports brokerage firms with favourable information so that they can better and more characteristically combine sports and business, as well as provide greater economic value to the sports industry. This study argues that agencies need to improve to adapt to this era of "player empowerment" and reap the benefits of having the players' interests as their primary goal.

Keywords: Sports agency, operational development, case study, process tracing

1. Introduction

With the rapid development of the market commercialisation and professionalisation of the sports industry, sports brokers play an important role in the sports industry. At the same time, sports brokers have played a driving role in the industrialisation and marketisation of professional sports. Taking professional sports basketball agent as an example, a basketball agent is a person who signs an appointment contract with a basketball-related person or company organisation for the purpose of obtaining a commission for the work. Basketball brokers act as a contracting medium for their clients in relation to professional sports and basketball competitions, and at the same time ensure that their clients maximise their benefits in a wide range of sports-related areas. As the community of destiny of athletes, sports brokers play the role of the pillar of athletes' sports career, the main content of which is to arrange for athletes' business cooperation, manage athletes' personal assets, take care of athletes' daily life and living, and deal with and co-ordinate athletes' private matters. Because of the

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value of the impact of the athlete's public relations image is also extremely important, through the use of media to the public dissemination of the athlete in the professional game, training and personal life reports to shape, so that the masses have a good impression of the athlete. Therefore, it is especially important for the agent to maintain the media image of the athlete, and should play the role of a "gatekeeper", with a high degree of sensitivity, using scientific communication methods and means to consolidate and strengthen the good impression in the minds of the public. An athlete's on-court image is significantly associated with athlete sponsor preferences, while off-court image influences athlete commitment and team commitment. The self-brand association is influenced by the athlete's off-court image and mediates the relationship between off-court image and the athlete's commitment [1].

In addition to the personal image of the athlete, the athlete's work in the process of the gatekeeper should also be carried out. During interviews or commercial performances, sports agents need to communicate regularly with athletes, mentioning the current public opinion situation and the bottom line, in order to prevent them from entering the minefield of words. Therefore, sports agents must always pay attention to public opinion, especially in this new media era. In the case of "public opinion storms", agents need to act as "defenders" to prevent the occurrence of maligning athletes and distorting the facts [2]. With the development needs of the market, sports agents also have a very important and positive role in promoting professional basketball, such as the development of basketball market rationalisation and marketing strategies, participation in tournament planning and operation, agency sponsorship rights, the development of basketball-related service products and improve the quality of the product and so on. Sports agents are directly involved in professional leagues, basketball promotions and exchanges between clubs and athletes, matching clubs, basketball association sponsors and advertisers, and have now become one of the actors in the basketball market.

In search for studies on agency operations and agents, most of them focus on the arts, with relatively few studies in the sports field. In reading of the literature related to the professional basketball industry, this paper also found that there are fewer studies on the operational aspects of brokers. The lack of quality information in the market makes it difficult to define the market value of basketball agents in the same way as athletes.

The main research objective of this paper is to analyse the principle and reasons of Klutch Sports' win-win situation by studying Anthony. The case of the trade of Anthony. Davis to the Lakers in 2019, collects relevant data, including interviews, literature and so on. In this paper, this paper analyse these data to describe the case to reveal the phenomenon to draw conclusions, and based on the conclusions to put forward recommendations with reference value.

2. Case Description

2.1. Landmark Events of "Win-win Interaction"

In 2018, Klutch Sports' most important client and Richie Paul's best friend, LeBron. Paul's best friend Lebron James opted to enter free agency and join the Lakers. James (Lebron. James) chose to enter free agency and join the Lakers. In a late December 2018 interview, LeBron publicly recruited Pelicans star Anthony. The NBA giants Lakers are located in the cosmopolitan city of Los Angeles, while the Pelicans are in the relatively small market of New Orleans [3]. In that deal, Richie Paul almost forced the Pelicans to trade Anthony Davis to the Lakers. Richie. Paul made it clear that Anthony. Davis only signed with the Lakers at the end of his contract. Since Anthony. Davis was under contract, and it was against NBA rules to designate a home, so the NBA fined Anthony Davis $50,000 for the trade. Davis' trade demanded a $50,000 fine. By suppressing offers from the Boston Celtics and New York Knicks, the Lakers led the Anthony. Probability of Davis' next home. Later in

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the season, the Pelicans put Anthony. Klutch Sports and Rich Paul pushed for Anthony Davis to join LeBron. Davis joins LeBron. James and the Lakers.

2.2. Company Profile

Klutch Sports, or KS, was founded by sports agent and CEO Rich. Paul was founded in 2012 and is based in Los Angeles, California. As a Forbes Top 30 sports agency with a clientele comprised of the top athletes in mainstream professional sports, including many big-name players, Olympic champions, and world champions, KS is able to help its clients take full advantage of opportunities in the entertainment, media, and business environments at any stage of their careers. The company also provides strategic support in branding, media, social responsibility, and other opportunities at the intersection of sports, entertainment, and culture. KLUTCH formed a partnership with UTA in 2019. KS operates across a wide range of sports, including the NBA, WNBA, NFL, MLB, and more. KS draws on proven expertise in sports, entertainment, and culture to connect top teams Klutch Sports is a leading sports agent in the United States, in mainstream leagues and connected to global brands.

2.3. Current Status of Development

KS has added two NBA Best XI clients and three first-round draft picks this year. In addition to the typical sports brokerage business represented by transfers and advertisements, KS Sports Brokerage Company is committed to providing its clients with more off-court business opportunities, so as to achieve the goal of comprehensively and deeply developing the commercial economic value of its clients. Specifically, for example, the company will organise clients to participate in public welfare activities to give back to the community in order to increase their social recognition, arrange clients to participate in fashion parties to raise awareness, hold charity speeches, co-agency video game rights, etc., but also provide clients with consulting, sales, sponsorship, naming rights and other related services [4].

2.4. Recipe for Success

The impact and significance of KS's rise as a sports agency that was able to successfully squeeze into the Forbes list within seven years is something to think about and learn from. Firstly, due to the relationship between CEO Rich Paul and NBA superstar LeBron. Paul's friendship with NBA superstar LeBron James. James' friendship, KS can promote its brand through LeBron's fame and connections. Secondly, as the person who accompanied LeBron when he was growing up, Richie. Paul is very clear about what the players think and strive for the best interests of the players, to create exclusive services for clients, put the athlete in the first place is KS unique way, KS will negotiate with the team management contract terms and details, and with sponsors and advertisers, to develop the commercial market for the players. KS can completely reduce the athlete's outside distractions and pressures. KS can be said to have done a great job in this regard. CEO Richie Paul has excellent negotiation skills, and his company is up-to-date on the market, so this makes them more strategic in negotiating with team management to get the best contract terms. In addition, KS also has a very experienced team of commercial talents who can provide players with all-round support, including finance, public relations, law, etc. KS can also provide players with better opportunities for business development and help them build up their personal brands and commercial channels. Over time, more and more players have joined KS.

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3. Analysis on the Problems

3.1. Operational Strategy of Klutch Sports

Based on the saturation of the traditional business model, KS has changed its mindset to utilise the existing resources and share them for greater profitability. Resources can be their own sponsors or sports platform resources such as players, stars, etc.

Back in 2006, Rich Paul was one of the key partners in Lebron's company LRMR,The company's philosophy is ‘We seek partners, not clients.’ They see their customers as partners. The concept of sharing is at the heart of LRMR. For Lebron, he also sees himself as a dominant player in the NBA rather than an ‘employee’ of the team owner. Lebron is more focused on being his own master than the athlete business partnership endorsement model, using his own resources to acquire equity, IP influence through the NBA and as a player, focus on building personal business IP. Especially in the current internet age, sharing resources has become more in demand and convenient. Lebron's termination of a business partnership endorsement between McDonald's is one of the classic cases, investing in and building the Blaze Pizza chain. Today he owns 17 of the brand's restaurants in the Chicago and South Florida areas. In 2016, restaurant sales increased 83 per cent to $185 million. In 2017, the restaurant plans sales of $285 million. In 2022, sales surpassed $1.1 billion. As a close friend of Lebron, Rich Paul has gone from being a jersey peddler in the early days to being at the helm of KS now,His own resources and operational acumen are limited, so to be able to do a sports agency of this size he was undoubtedly influenced and nurtured by Lebron's team. It is in this way that the same philosophy is reflected in KS's corporate strategy. KS's sincerity towards their customers is quite evident in their competition. They leave no stone unturned in acquiring resources in the sports world, not only for the big names, but KS promises every client that they will get them the best contract from the team. Additionally, it cannot be ignored that LeBron as an IP is often the biggest guarantor of a company's influence and execution. Rick Paul with 14 NBA stars endorsed by him and a total annual salary of $125 million, Paul is also ranked sixth on the NBA Agent Power Rankings [5].

According to the official website of UTA, in 2019 UTA has partnered with Klutch Sports Group, a top sports organisation founded by Rich Paul, to form UTA Sports.As a transformative new partnership in which KS will continue to operate under its own brand. Paul will also become head of UTA Sports, focussing on building UTA's sports business for athletes in all their professional activities on and off the field. Back in 1991, UTA was founded by Jeremy Zimmer, Peter Benedek and Jim Berkus as United Talent Agents, formed by the merger of the Bauer-Benedek agency and the Leading Artists agency. The merger combines the two agencies' expertise in film and television. In 2015, UTA acquired The Agency Group, the world's largest music agency, making the company a global leader in music brokerage. UTA has attracted investment from private equity firms Investcorp and PSP Investments to support further expansion and has made a number of acquisitions that have enhanced its ability to provide a full range of services to its clients. It can be seen that UTA's size and credentials are far greater than those of KS, and KS's choice to defect to UTA in 2019 is in line with their strategy of shared resource utilization and blurred stakeholder relationships. KS has successfully expanded itself as a result. For UTA, the partnership with Klutch Sports Group allows UTA to enter directly into the business of negotiating athlete contracts and enhancing its sports business with some of the most compelling and challenging sports agents in the industry today. It is an interactive win-win situation [6].

3.2. Team Philosophy

KS always has constructive and honest conversations with its clients, providing them with decision-making power. This is one of the big reasons why KS has stood out in recent years. ‘Player empowerment’ is limited by the interests of capitalist team owners, and when clubs and players are involved in transfers, the demands of both sides will go head-to-head. Team power far outweighs player power, which leads to teams having absolute initiative in renewing and trading their top players or average players, undermining the principle of fair competition in a market economy, reducing player mobility and infringing on players' own interests. This is the reason why player transfer disputes have continued in recent years, and the process of maturing the management system and governance of professional sports has been hampered. The NBA league implements a combination of full free agents and restricted free agents in terms of player contract regulations and transfer systems. The NBA did not start out with a free-transfer system,the development of the relevant contractual legislation as well as the transfer system has undergone a long historical evolution before it has matured. From the original reserve clause system to the free agent system after the 1970s. The league protects the interests of smaller teams by mandating restricted free agency, the Arenas clause, the Bird clause, the salary cap system, balance the interests of players and teams by endeavouring to promote balanced competitiveness among teams [7]. For example, the salary cap system, which is a product of the league's efforts to promote fair play. Its main function is to place limits on the salaries of NBA players so that a team's total payroll cannot exceed a certain amount. The salary cap is the result of one labour negotiation between NBA players and team general managers, a cap that can be obtained by forecasting and calculating the revenue of basketball-related businesses across the league before the start of the new season each summer [8].

Anthony was effectively on the weaker side of the Anthony Davis deal. As the Pelicans' top player, the team has operated weakly and ineffectively for many years and has not achieved anything. Yet Anthony is at the top of his game, 28.1 ppg, 11.1 rpg, 2.3 apg, 1.5 spg, 2.6 bpg in 17-18. These are the numbers of a top All-Star lineman, and as the Olympic champion with Team USA in his rookie season and known by fans as ‘son of America’, Anthony's on-court prowess and commercial value speak for themselves. The Pelicans did not want to let him go so easily, and the NBA rules that prohibit a player from openly recruiting and prohibit a player from naming an underling are designed to protect the interests of the owners, which are the owners of the team, Local fans have also accused Anthony of defecting and labelled him ‘disloyal’, which is certainly not fair to Anthony. Operators dominate the entire league and are rarely blamed for continually milking the athletes, while free transfers of ballplayers are treated with a double standard [9]. KS took a tough stance on the matter and safeguarded Anthony's interests. The ‘athletes first’ philosophy adopted by the KS was another landmark change after the players' union gained the right to negotiate in 1965 [10]. And on a win-win level based on interaction, the Lakers after that cruised to a championship in the 2019-2020 season, Lebron and Anthony profit and the Lakers profit. And the Pelicans get young player assets as well as draft picks. They drafted Zion Williamson with the first pick after that, and as the team's cornerstone, he is being touted as the next Lebron. The Pelicans gained a future, and KS relied on the trade to enhance its reputation and influence, leading more and more players to consider and join the KS banner. It also proves that it is possible to achieve a win-win situation from the player's point of view where the team profits as well as the player as well. The team is reluctant to do this because, as an owner, the goal is to maximize profits and is not willing to have anything to lose [9].

4. Suggestions

In the summer of 2019, the Brooklyn Nets became the focal point of the entire NBA with the addition of Kevin Durant and Kyrie Irving to form the NBA's most offensive duo. With the addition of James

Harden and the comeback of Kevin Durant for the 2020-2021 season, the Nets with the Big Three are already the favourite to win the championship, but the playoff exit led directly to the subsequent breakup of the Big Three. James Harden is out to the Philadelphia 76ers, Kyrie Irving is out to the Dallas Mavericks, and Kevin Durant is out to the Phoenix Suns after constantly pushing management. In this era of ‘player empowerment’, the Nets have fallen victim to the power given to the players [11]. The power given to players should not override the operating guidelines of commercial leagues and the sportsmanship of professional sports. This will affect the normal operations of NBA teams. And the team owners and the league will do something to counteract that. This certainly intensifies the struggle between the two sides and has a negative impact on the overall interest [12].

Therefore, as the gatekeepers of the players' behaviour and the link between the players and the teams, the agents have more expertise and are better equipped to deal with emergencies. In most cases, the player is acting more from a personal perspective and the results obtained are not always favourable or optimal, so the agency needs to control the power over the player, especially the star player.

5. Conclusion

With the rapid development of sports commercialisation and professionalization, sports agencies have become an important part of the sports industry, and sports agencies are a new pillar in the rapid promotion of the industrialization and marketisation of professional sports. In a business alliance, athletes are frankly just a tool for the operator to make money, and the co-operation between the two parties can only be based on certain guaranteed benefits, once divorced from financial gain, loyalty is nowhere to be found. Loyalty must be mutual and perceived, not unilateral, but often athletes are in a very passive position, both in terms of interest and loyalty. Therefore KS is a pioneer and their philosophy is very informative. There is a need to empower relatively vulnerable groups of athletes to fight for their own interests, and for star athletes to control their power in order to prevent non-compliance or passive fulfilment of the contract by relying on their fame. Agencies need to change their mindset and strategy as soon as possible to reap the benefits of this era of ‘player empowerment’. This paper examines Klutch Sports as an example of an agency that needs to change its paradigm in the current era of ‘player empowerment’, to provide professional sports agents with favourable information that will enable a better and more distinctive combination of sports and business, it also provides greater economic value to the sports industry. It is also hoped that this study will balance the weight of dominating one's career between average athletes and superstars in the future. As the researcher of this paper is located in a different country from the organizations of KS, it is difficult to visit the field and it is difficult to check the details of the company's income and expenditure on the internet, which limits the availability of data on the operations of KS in this paper. Authors hope more cases and operational data can be researched in the future.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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A Financial Analysis and Valuation of Agnico-Eagle Mines Ltd

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Abstract: The purpose of this article is to analyze the market environment and financial position of Agnico Eagle Mining Company in order to provide investment advice. AEM occupies an important position in the global mining industry. Despite the apparent cyclical nature of the mining industry, AEM has also benefited from the recovery in commodity prices and the recovery in mining company profits since 2015. This article analyzes and evaluates the financial performance and market value of Agnico Eagle (AEM) from various aspects, such as financial ratio analysis, discounted cash flow (DCF) model, relative valuation method, industry trend analysis, and risk assessment. This paper evaluates AEM's liquidity, solvency and profitability by comparing key metrics such as quick ratio, current ratio, long-term debt ratio, cash ratio, total debt ratio and interest coverage ratio. It also analyzes global gold demand, mining market recovery, and critical metals market dynamics, providing context for AEM's future revenue forecasts and strategic decisions. After a comprehensive analysis, AEM is considered to have good growth potential and competitive advantages, making it suitable for investors looking for stable returns.

Keywords: Agnico-Eagle Mines Ltd, Financial Analysis, Performance Evaluation, Valuation

1. Introduction

World's third-largest gold producer, Agnico Eagle (AEM) is a sophisticated gold mining business headquartered in Canada. The Company conducts exploration and development efforts in Canada, Australia, Europe, Latin America, and the United States in addition to its mines, which are situated in Canada, Australia, Finland, and Mexico. With a focus on sustainability while mining the mining industry, Agnico Eagle is globally recognized for its leading environmental, social and governance (ESG) philosophy and has received numerous awards from local governments. Founded in 1957, the company has been creating value for shareholders and has declared annual cash dividends since 1983. The company aims at achieving efficient and high-quality value growth and maintain high standards in health, safety, environmental affairs and social responsibility [1]. AEM innovates and develops new technologies to drive the production of the future [2]. AEM hires the best people and motivate them to reach their potential. While the company's primary focus is gold, it monitors opportunities and considers exploration, development and mining, or invests in companies focused on strategic and critical metals, including copper, nickel and lithium.

AEM is a mining company. Mining is a very cyclical industry, with huge investments and is highly affected and constrained by downstream demand. After entering the 2010s, global economic growth

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slowed, the demand for commodities, especially various minerals, weakened, and commodity prices and industry profits plummeted. As it can be seen from the Bloomberg Commodity Index chart, the mining industry has been in a downturn for a decade since 2013. In 2015 alone, the global mining industry wrote down more than $50 billion in assets. However, since 2015, commodity prices have begun to recover, and the industry's profit level will inevitably rise in tandem. And that's exactly what happened. According to PwC's annual mining statistics, the top 40 companies in the mining industry, including AEM, have improved year on year and weathered the Covid-19 pandemic more smoothly than any other industry, peaking in 2021. In 2021, the world's top 40 mining companies continued their strong performance since 2020, with revenue up 32% and net profit jumping 127%. Backed by high commodity prices and sound cost management, the "Big 40 Mining Companies" are in excellent financial position. In 2022, the combined revenue of the top 40 mining corporations was $711 billion, almost on par with their 2021 highs. They have a solid balance sheet and debt remains low [3]. However, due to cost inflation and economic uncertainty, EBITDA margins declined as expected.

Overall, the mining industry is in a stable stage of development after recovery, and the potential is huge. AEM, as a mining company, is very similar to the industry as a whole. AEM needs to maintain its past performance while pursuing its future growth, and as a result, AEM faces a number of challenges: (1) Mining industry margins (returns) remain low; (2) The cost of developing new projects is increasing and investment decisions are risky; (3) National policies on the mining industry lead to increased approval costs; and (4) Political risks.

2. Performance Evaluation

This section will evaluate the financial performance of Agnico Eagle (AEM) in detail and compare it to its main competitors, Barrick Gold Corporation (GOLD), Newmont Corporation (NEM) and Kinross Gold Corporation (KGC). This part will include analysis of key financial ratios for liquidity, solvency and profitability, sourced from Yahoo Finance and NASDAQ.

2.1. Liquidity

The liquidity ratio measures a company's ability to meet its short-term debts [4]. Key liquidity ratios include the current ratio, quick ratio, and cash ratio, as shown in Table 1.

Table 1: Liquidity ratios of AEM and its competitors.

Company	current ratio	quick ratio	cash ratio
AEM	1.23	0.67	0.24
GOLD	2.10	1.50	1.10
NEM	2.25	1.80	1.30
KGC	1.80	1.20	0.80

Data source: Yahoo Finance & NASDAQ.

The ability of AEM to pay its current liabilities with its current assets is indicated by its current ratio of 1.23, but its short-term solvency is mediocre compared to industry leaders. In comparison to Barrick Gold's current ratio of 2.10, AEM's liquidity performance is not outstanding. Analyzing the quick ratio further, AEM's 0.67 indicates that the company's ability to cover current liabilities has decreased after removing assets that are difficult to liquidate quickly, such as inventory. This ratio, compared to Newmont's 1.80, shows that AEM's ability to liquidate assets to service debt in the short term needs to be strengthened. The cash ratio, which is a direct indicator of a company's immediate solvency, is weak at 0.24. AEM's ability to mobilize cash to service debt in an emergency is

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significantly inadequate compared to Barrick Gold and Newmont's 1.10 and 1.30, which could be a potential risk to its financial soundness in the event of market volatility or unforeseen events.

In summary, AEM has performed moderately in terms of liquidity, but its cash ratio is low and may be under pressure when short-term cash demand is high. In contrast, Newmont has the best performance in terms of liquidity, with higher ratios than other competitors, showing greater short-term solvency and cash flow efficiency.

2.2. Solvency

The solvency ratio assesses a company's ability to meet its long-term debts [5]. Key solvency ratios include the total debt ratio, the long-term debt ratio, and the interest coverage ratio, as shown in Table 2.

Table 2: Solvency ratios of AEM and its competitors.

Company	total debt ratio	long-term debt ratio	interest coverage ratio
AEM	0.45	0.35	5.00
GOLD	0.50	0.40	6.00
NEM	0.48	0.38	5.50
KGC	0.55	0.45	4.50

Data source: Yahoo Finance & NASDAQ.

AEM's total debt-to-asset ratio is lower than the industry average, reflecting its lower financial leverage. This is particularly evident in comparisons with Barrick Gold, which has a higher total debt ratio, indicating a larger proportion of debt in its capital structure. In terms of long-term debt, AEM's ratio is lower than that of Barrick Gold, meaning that it is more prudent in raising its long-term capital, which helps to reduce long-term interest expenses and thus maintain financial stability in the face of rising interest rates. However, Barrick Gold has a higher interest coverage ratio, suggesting that its profitability is sufficient to cover interest expenses and has a large margin of safety. In contrast, AEM's interest coverage ratio is low, suggesting that its profitability is weaker in its ability to cover interest expenses, which can be a source of financial risk in the event of rising interest rates or declining earnings.

The analysis shows that while AEM performs well in terms of solvency, it is inferior to Barrick Gold and Newmont in the face of high interest payments. This may mean that AEM needs to be more cautious when increasing its debt financing to avoid impacting its financial stability due to excessive interest burdens.

2.3. Profitability

A company's ability to turn a profit in relation to its revenues, assets, and shareholders' equity is evaluated by its ratio of profitability [6]. The gross margin, net profit margin, and asset turnover are important profitability ratios, as shown in Table 3.

Table 3: Profitability ratios of AEM and its competitors.

Company	Gross margin	long-term debt ratio	interest coverage ratio
AEM	0.23	0.13	0.60
GOLD	0.25	0.15	0.65
NEM	0.24	0.14	0.63
KGC	0.22	0.12	0.58

Data source: Yahoo Finance & NASDAQ.

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AEM's gross and net profit margins are lower than those of Barrick Gold and Newmont, a difference that highlights AEM's need for further optimization in cost management and profitability. Barrick Gold's higher gross and net profit margins are a direct reflection of its productivity and cost control advantages. Even though AEM's asset turnover is comparable to the industry standard, there is still room for improvement compared to Barrick Gold, which points to the need for action on AEM's asset operational efficiency. To improve profitability, AEM must deeply analyze its cost structure, identify and cut unnecessary expenses, and improve operational efficiency. In addition, by adjusting its product pricing strategy, AEM was able to increase its competitiveness in the marketplace and thus increase its profitability. At the same time, AEM needed to explore more efficient asset management strategies to improve asset turnover, which in turn would enhance overall profitability.

The comprehensive assessment shows that while AEM is solid in terms of profitability, there is still room for improvement in gross and net profit margins compared to industry leaders. AEM's asset turnover ratio also indicates that the company needs to make further improvements in the efficient use of its assets. With these measures, AEM is expected to close the gap with its competitors and strengthen its market position.

2.4. Summary

A detailed comparison of the financial ratios of Agnico Eagle (AEM) to its key competitors shows that AEM performs well in terms of liquidity, solvency and profitability, but there is still room for improvement in some key metrics. In terms of liquidity, AEM's current and quick ratios are slightly lower than those of its major competitors, and in particular its cash ratio is underperforming Barrick Gold and Newmont, which will make it less able to respond to sudden cash needs in the near term.

In terms of solvency, AEM's total debt ratio and long-term debt ratio are at medium levels, but its interest coverage ratio is not as good as Barrick Gold's. This illustrates the need for AEM to be more cautious in increasing debt financing to avoid excessive interest burdens affecting its financial stability. In terms of profitability, AEM's gross margin, net profit margin and asset turnover ratio are all lower than those of Barrick Gold and Newmont, indicating that there is room for improvement in cost control, profit generation and asset utilization efficiency.

Overall, AEM is in a relatively strong financial position in the industry, but still needs to improve cash liquidity, optimize cost control, and improve asset utilization efficiency to remain competitive in the fierce market competition [7].

3. Valuation

3.1. Discounted Cash Flow Forecasts

The Discounted Cash Flow (DCF) model is valued based on the present value of future cash flows. According to the latest financial data, AEM's free cash flow in 2023 was $947.4 million [8]. The current surge in global demand for clean energy technologies and electric vehicles has driven a significant increase in demand for critical minerals such as copper and lithium [9]. In addition, governments around the world have taken policy measures and provided financial support to ensure the supply of critical minerals. These measures, including the issuance of green bonds and access to sustainable capital, have provided a new source of funding for mining companies. In 2022, $450 billions of green bonds were issued globally, which is expected to grow by 30% in 2023 [10]. M&A activity by mining companies has also increased significantly in response to intense competition in the critical minerals market. In 2022, the total value of transactions in critical minerals increased by 151% compared to 2021, accounting for 66% of the total value of all transactions in that year. This aggressive M&A activity has helped mining companies reallocate their portfolios to capture the long-term growth opportunities presented by the clean energy transition [11]. In addition, mining companies are improving operational efficiency and market competitiveness by implementing low-carbon technologies and methods [12]. For example, the adoption of renewable energy and hydrogen transport can significantly reduce carbon emissions and improve energy security and cost-effectiveness in mines [13]. Taken together, mining companies have the potential to achieve 30% annual DCF growth, driven by increased demand for critical minerals, government policy support, increased M&A activity, and a drive for decarbonization. Assuming that free cash flow will grow at a rate of 30% per year over the next few years, and using a discount rate of 8% and a perpetual growth rate of 2%, it can calculate the terminal value and present value of AEM. The free cash flow forecast for the next five years is as Figure 1 shown.

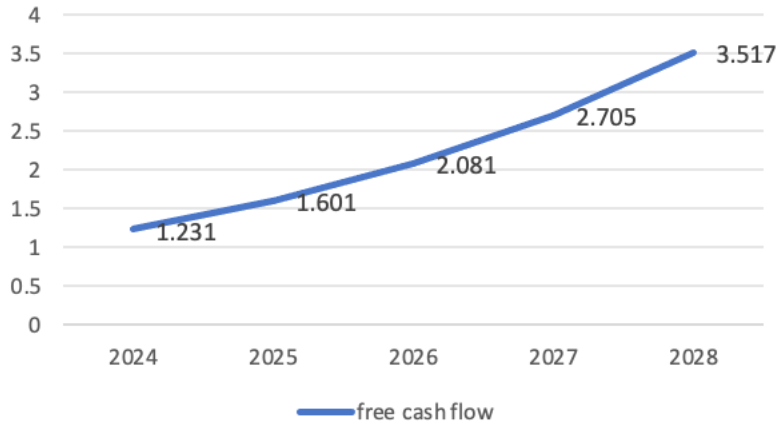

Figure 1: Free cash flow forecast of AEM from 2024 to 2028 (Photo/Picture Credit: Original).

After substituting the data, the final value is: $59,797.5 million. The present value of the discounted free cash flow and terminal value for the next five years is as Figure 2 shown.

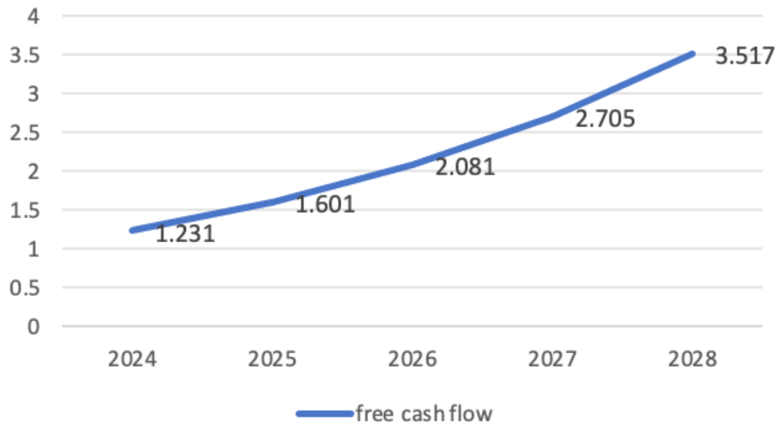

Figure 2: Present value of the discounted free cash flow and terminal value of AEM from 2024 to 2028 (Photo/Picture Credit: Original).

The total present value is 49.3019 billion US dollars. The market value of AEM is estimated to be approximately $49,301.9 million through the DCF model. This is close to the current market capitalization of $46 billion, indicating that the current market value of AEM is relatively reasonable. The relative valuation method estimates a company's market value by comparing AEM to other companies in the same industry, such as price-to-earnings (P/E), price-to-book (P/B), and enterprise value multiples (EV/EBITDA). The data from Yahoo Finance shows that: AEM's P/E ratio is 12.8x

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(pe/), Barrick Gold has a P/E ratio of 15.34x, Newmont Inc. is trading at a P/E ratio of 17.45x, and Keno Mining has a P/E ratio of 13.98x.

By comparison, it can conclude that AEM's valuation in the industry is reasonable, slightly lower than Newmont, but similar to Barrick Gold, indicating that AEM's valuation is competitive in the industry.

3.2. Financial Valuation

AEM is a Canada-based advanced gold mining company with operations in Canada, Australia, Finland and Mexico.

Through the analysis of its financial performance, market trends, and industry dynamics, it can make predictions about its development in the coming years [14]. Against the backdrop of a steady rise in the gold price, AEM's revenue is expected to continue to grow. According to PwC's 2023 Mining Report, global demand for gold will remain strong, especially amid increased economic uncertainty and rising inflation expectations. AEM's revenue is expected to grow at an annual rate of 5%, mainly due to its stable production capacity and efficient cost management. AEM has always been committed to controlling costs through technological innovation and efficiency improvements. It is expected that in the coming years, the company will continue to invest in automation, digitalization and low-carbon technologies to further reduce operating costs. For example, by introducing automated equipment and optimizing mine operation processes, AEM can reduce labor costs and increase production efficiency. In addition, the use of renewable energy will also help companies reduce energy costs and comply with increasingly stringent environmental regulations around the world [15]. AEM's profit margins are expected to improve as revenue grows and costs are effectively controlled.

Assuming that the gross profit margin remains at about 23% and the net profit margin is stable at about 13%, the company's net profit is expected to achieve steady growth in the next few years. In addition, as the company invests in new projects and optimizes existing projects, its asset turnover ratio is also expected to increase, thereby further enhancing profitability. In order to maintain and expand production capacity, AEM plans to make some level of capital expenditure over the next few years. This includes the expansion of existing mines and the development of new mines. While these capital expenditures will increase the company's liabilities, AEM is expected to achieve a return on investment in the short term through effective cost management and improved profitability.

3.3. Strategy & Risks

AEM's strategy is focused on improving production efficiency, expanding mine resources, achieving sustainable development, and optimizing capital structure. The company plans to improve the operational efficiency and production capacity of the mine through the application of automation and digital technologies; increasing gold reserves and production capacity through exploration and acquisition of new mine resources; Practicing sustainability through environmental initiatives and community support projects; Optimize the company's debt and equity structure through effective capital management.

However, AEM also faces a number of risks. The first is market risk, where fluctuations in gold prices are a major challenge for AEM, and the company needs to maintain a flexible operational strategy to respond to changes in gold prices. In addition, global economic conditions and geopolitical events may also have an impact on a company's revenue and profits. The second is the technology risk, with the rapid development of mining technology, companies need to constantly update and optimize equipment to maintain a competitive advantage. Technological innovation and equipment

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updates require significant capital investment, and there is a risk that the technology implementation will fail.

Finally, there are environmental risks, and with the global emphasis on environmental protection, mining companies need to comply with increasingly stringent environmental regulations. While AEM has always excelled in environmental protection, it still needs to continue to invest to stay ahead of the curve. In summary, through a comprehensive valuation analysis, revenue forecast, and discussion of strategy and risk, it can conclude that AEM has good growth potential and competitive advantage. However, companies still need to pay attention to market dynamics and flexibly adjust their operational strategies to deal with possible market and operational risks, so as to remain competitive in the fierce market competition.

4. Conclusion

AEM performed well in terms of liquidity, solvency and profitability. The company's current and quick ratios indicate that it is strong in its short-term solvency, and although its cash ratio is slightly lower, it is generally able to respond effectively to short-term financial needs. In terms of solvency, AEM's total debt ratio and long-term debt ratio indicate that its debt level is moderate, and the interest coverage ratio indicates that the company has strong solvency. In terms of profitability, AEM's gross and net profit margins are at the highest level in the industry, and its asset turnover ratio shows that its asset utilization efficiency is good.

Through the analysis of the DCF model and the relative valuation method, it determined that the market value of AEM was reasonable and attractive. The DCF model shows that AEM's free cash flow and final value show good growth potential, with a market value of approximately $49.3 billion. In the relative valuation method, AEM's price-to-earnings ratio, price-to-book ratio, and other metrics show that it is competitive in the industry and has a moderate valuation level compared to its main competitors. The future outlook for AEM is positive. Its revenue is expected to continue to grow, benefiting from stable gold prices and strong market demand. Cost containment measures, technological innovation, and automation will further improve production efficiency and reduce operating costs, resulting in higher profit margins. The Company's capital expenditure plans and mine expansion projects will support future growth.

AEM's strategic priorities include improving production efficiency, expanding mine resources, achieving sustainable development, and optimizing the capital structure. The company's positive actions in these areas will help to enhance its market competitiveness. However, AEM also faces challenges such as market risks, technical risks, and environmental risks. Companies need to address these risks through agile operational strategies and continuous investment in technology and environmental protection to maintain their leading position in the industry. Based on a thorough analysis of Agnico Eagle Mines Limited, it can be concluded that it performs well in terms of financial performance, valuation levels and future outlook. The company has good growth potential and strong market competitiveness, and despite certain market and operational risks, AEM is expected to continue to achieve solid growth in the future through effective strategy and risk management. Therefore, the investors are optimistic about the future development of AEM and recommend that investors fully consider these analytical findings in their decision-making process.

Taking into account AEM's financial health, valuation conclusions, future outlook, and strategy and risk management, it can be believed that AEM is a company with good growth potential and competitive advantage. For investors looking for stable returns and long-term growth, AEM is an investment to watch. However, investors should remain vigilant and pay close attention to market dynamics and the company's operations, and adjust their investment strategies in a timely manner.

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An Analysis of the Walt Disney Company (DIS) Financial Performance and Comparison with Competitors

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Abstract: The Walt Disney Company (DIS) is a giant in the entertainment industry with a diversified investment portfolio, including theme parks and streaming services such as Disney+. This article provides an in-depth analysis of DIS's liquidity, solvency, profitability, and valuation, and compares it with major competitors such as Sony, Comcast, and Netflix. DIS has demonstrated good liquidity and debt paying ability, thanks to diversified sources of income and prudent financial management. Compared to competitors such as Netflix, although its profitability indicators are robust, there is room for improvement. Valuation indicators indicate that, the pricing of DIS's stock price is relatively reasonable, but investors should be aware of the risk of overvaluation. DIS's strategies include expanding streaming services, maximizing theme park revenue, and embracing digital transformation. Although DIS offers the potential for stable growth, investors must be wary of industry disruption and constantly changing consumer preferences. In this rapidly developing entertainment industry, the position of DIS cannot be ignored, and investors also need to carefully weigh risk and return. This paper adopts fundamental analysis to inform investors insights of the risks and opportunities of DIS.

Keywords: Financial Analysis, The Walt Disney Company, Entertainment Industry, Operation Management

1. Introduction

The Walt Disney Company (DIS) is one of the world’s largest companies in the entertainment industry, Founded in 1923 by Walt Disney and Roy O. Disney. Chen et al. pointed out the company has gradually accumulated experience, capital and technology to support its development since 1923 [1]. It covers a wide range of operations throughout different industries. The company operates in the entertainment industry mostly, which is a major player with significant influence and market presence in entertainment industry. Disney involve slightly in retailing industry, sports industry, technology industry, etc. Disney has a market domestically and internationally; its products and services are enjoyed by both adults and kids. It runs 6 theme parks in America, Japan, China and France. Disney’s operations contain many segments. Here are some key segments. Firstly, Disney operates TV networks such as ABC, Disney channel, ESPN and so forth, generating its revenue through advertising. Secondly, there are six theme parks operated by Disney around the world, which are Disneyland Park in California, Walt Disney World Resort in Florida, Tokyo Disney Resort in Japan, Disneyland Paris in France, Hong Kong Disneyland Resort in China and Shanghai Disney Resort in

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China, revenue is mainly from ticket sales, peripheral products, hotel stays. Thirdly, this segment encompasses Disney's film production and distribution operations, including Walt Disney Pictures, Pixar, Marvel Studios, Lucasfilm, and 20th Century Studios, revenue is mainly from box office sale, licensing agreements. Fourthly, Direct-to-Consumer & International (DTCI), this segment is specifically operated by Disney, including Disney’s stream media platforms such as Disney+, ESPN+, Hulu and other sales in international net media. The establishment of DTCI is mainly aimed to adapt the trend of digitalization and global market expansion. Revenue is generated through subscription fees and advertising. Yang mentioned that technologies like VR, AR and AI are a new breakthrough for DIS. The company has launched an application called “Disney Movies VR” with the favor of which an interactional virtual theme park can be developed. The immersive entertainment experience provide by these technologies can, to a certain degree, help TWDC make up for its shortcomings [2]. Here are some good news and bad news concerning DIS recently. In a good way, Disney+, Disney's streaming service, narrowed its losses in the third quarter of fiscal 2023, showing signs of a gradual turn around. Meanwhile, Disney's Park Experience and Products business generated $8.326 billion in revenue in the third quarter of fiscal 2023, an increase of 13%, primarily driven by revenue from Shanghai Disney Resort and Hong Kong Disney Resort. Furthermore, Disney announced an increase in streaming subscription fees, which is expected to help increase average monthly revenue per paying subscriber. In a bad way, a generation raised on Netflix has fundamentally altered the nature of media consumption, which is a problem for Disney. There is an upward trend in Disney’s DTCI segment, but it is still losing. At the same time, Disney posted a quarterly net loss in the third quarter of fiscal 2023, with a net loss attributable to the parent of $460 million, compared with a net profit of $1.409 billion in the same period last year.

2. Performance Evaluation

Sumathi & Narasimhaiah’s study pointed out that the fixed and the current assets play a vital role in the success of any company. Managing the working capital is mandatory because it has a huge significance on profitability and liquidity of the business concern. The increase in working capital helps in improving its liquidity. Thus, a company needs to have a correct balance between the liquidity position and the profits of the company. The various components for measuring the working capital management include the receivable days, Inventory turnover [3]. In order to analyze the performance of DIS, the following analysis focuses on the comparison between DIS and other competitors in this research. Sony Group Corporation (SONY), Comcast Corporation (CMCSA), and Netflix Inc. (NFLX) are three representative competing companies.

2.1. Liquidity

Table 1: Liquidity ratios of DIS and its competitors.

Company Code	Current ratio	Quick ratio	Cash ratio
DIS	105.22%	98.91%	45.54%
SONY	62.05%	46.28%	19.44%
CMCSA	59.67%	59.67%	15.46%
NFLX	111.93%	111.93%	80.56%

In order to analyze the liquidity of The Walt Disney Company (DIS), Table 1 is presented here to showcase the comparison between the Walt Disneyland Company (DIS) and other companies in this research. Sony Group Corporation (SONY), Comcast Corporation (CMCSA), and Netflix Inc. (NFLX) are three representative competing companies. This comparison can provide meaningful

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observations and analysis of these companies' financial health. These ratios are important indexes for investors to make decisions. According to Koen and Oberholster's analysis, the current ratio determines to what extent current liabilities are covered by current assets [4]. From the perspective of current ratio, which is a vital index to measure a company's ability to cover the short term liabilities with short term assets, DIS performed exceptionally well with a current ratio of 105.22%, indicating that it has more than enough current assets to cover its current liabilities. This ratio is much better than the figure for Sony Group Corporation (SONY) and Comcast Corporation (CMCSA), with current ratios of 62.05% and 59.67% respectively, indicating Disney's better liquidity. However, NFLX showcases a slightly better figure in this aspect, which has a current ratio of 111.93%, this can imply that NFLX even has a stronger liquidity. Then getting into the quick ratio, which does not include inventory from current asset, in order to provide a comparatively more conservative approach to measure a company's liquidity. Similar to current ratio, it mainly focuses on the assets and liability. However, for the quick ratio, it mainly focus on the liquid part [5]. Disney is still maintaining good data in this respect with a high quick ratio of 98.91%, which is very remarkable. The quick ratios of SONY and CMCSA are significantly inferior than that of DIS with 46.28% and 59.67% respectively, which indicate worse liquidity. However, it is worth mentioning that Netflix remains its high liquidity in the index with a quick ratio of 111.93%, which is much greater than that of DIS, implying comparable liquidity in terms of quickly accessible assets. Lastly moving into evaluating the cash ratio., which is a financial indicator that measures a company's ability to repay short-term debts using cash and cash equivalents. In this respect Disney's cash ratio stands at 45.54%, the performance of DIS in this indicator is relatively stable, but markedly overtakes the figure for SONY and CMCSA with cash ratios of 19.44% and 15.46% respectively. Nevertheless, Netflix maintains its extraordinary performance in this aspect, boasting a cash ratio of 80.56 which is extremely impressive, showcasing much better liquidity in terms of cash ratio.

Disney has a strong level of liquidity compared to its competitors such as Sony and Comcast, thanks to its diverse revenue streams, including theme parks, media networks, movies, and Disney+. At the same time, Netflix's dominant position in the streaming sector and its large cash reserves constitute a formidable competitive advantage. Disney's strategic moves, such as content creation and acquisitions, have bolstered its financial performance. In the evolution of the industry, maintaining a strong level of liquidity is crucial for Disney, ensuring long-term growth and resilience.

2.2. Solvency

Table 2: Solvency ratios of DIS and its competitors.

Company Code	Total Debt Ratio	Long-term Debt Ratio	Times interest Ratio
DIS	97.96%	42.41%	494.46%
SONY	343.19%	24.45%	2102.03%
CMCSA	219.90%	114.89%	601.05%
NFLX	136.70%	68.70%	986.71%

Solvency indicates a company's capacity to fulfill its long-term financial responsibilities. It serves as a gauge for a company's financial well-being and steadiness, revealing whether the company possesses enough assets to cover its short-term and long-term debts. Fundamentally, assessing solvency ascertains whether a company is capable of sustaining operations in the long run without experiencing financial hardship or insolvency. Table 2 above showcases 3 significant ratios to measure the solvency of the 4 competing companies in the entertainment and media industry, offering insights into the risk management strategies and financial health of them. DIS has a total debt ratio 97.96%, which means that the majority of its assets is financed through debt. It seems that the figure

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is extremely high, but getting into detail can help to figure out the reason properly. It is noticeable that the long-term debt ratio of DIS is 42.41%, which means approximately a half of its liabilities is long-term. Therefore, the investors can have a deeper insight into the company’ s financial structure, which is relatively more stable and predictable in comparison to some of its competitors. However, essentially these two ratios showcase a marked debt burden of DIS, even though the debt structure is easier to manage in comparison to its competitors, which will be analyzed later. DIS has a 494.46% times interest ratio, implying its great ability to cover the interest expenses multiple times over and meet its financial capacity.

By contrast, the total debt ratio of SONY is 343.19%, the figure is extremely astonishing and much higher than that of DIS. However, the long-term debt ratio of SONY is relatively lower of around 24.45%, this indicates that SONY mostly financed its assets by some short-term debt and other financial strategies. CMCSA is a major player in the telecommunications and media industries. The company's total debt ratio is 219.90%, which is significantly higher than that of DIS. In addition, Comcast Telecom's long-term debt ratio is as high as 114.89%, indicating the company's high reliance on long-term debt, which can expose it to interest rate fluctuations and other risks associated with long-term financing. By comparison, entertainment disruptor Netflix Inc. has a total debt ratio of 136.70%, which is lower than Disney and Comcast Telecommunications but higher than SONY Corp. Although Netflix's debt ratio is relatively low, its interest rate is 986.71%, which is even higher than Disney's, indicating a strong ability to service its debt. To sum up, In the face of significant debt challenges, DIS continues to demonstrate its financial soundness. Thanks to its strong interest coverage multiple and stable long-term debt levels, Disney's risk rating is seen as within a manageable range when compared to the rest of the industry. As the entertainment and media industry grows rapidly, Disney is in a good position.

2.3. Profitability

Table 3: Profitability ratios of DIS and its competitors.

Company Code	Gross Profit Margin	Net Profit Margin	Asset Turnover
DIS	33.41%	2.65%	43.45%
SONY	27.22%	8.18%	35.26%
CMCSA	69.76%	12.66%	46.57%
NFLX	41.54%	16.04%	69.30%

Talking about the profitability ratio, the profitability ratio represents how much the return of a company is associated with the profit made by that company [6]. When assessing the profitability of DIS, its financial metrics need to be compared to other companies in its industry. Gross margin is one of the key financial metrics that shows the percentage of the difference between what a company earns from sales and what it costs to produce. Gross profit margin measures the remaining percentage of the sale if company has paid for its goods [7]. Disney's gross margin was 33.41 percent, indicating that the company is doing a pretty good job of controlling costs and generating revenue. However, if you compare this metric with Comcast Telecom's gross margin of 69.76%, you can see that Disney has room to improve in terms of gross margin. This difference could mean that Comcast Telecom has a more effective strategy or advantage in cost management or cost structure.

In addition to gross margin, net margin is also an important consideration when analyzing the profitability of DIS. Net profit margin is the percentage of net income a company is able to retain from each unit of revenue after deducting all operating costs, taxes, interest and other expenses. Disney's net profit margin was 2.65 percent, meaning that for every dollar of revenue earned, the company was able to keep 2.65 cents in net profit.

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While this ratio shows Disney has some profitability, it looks relatively low compared to its competitors. Netflix Inc. 's net profit margin of 16.04%, for example, is significantly higher than Disney's. The difference may reflect a more effective strategy in cost control and revenue generation, or a more favorable profit model.

In continuing to evaluate the financial performance of the Walt Disney Company (DIS), asset turnover is a measure of the company's ability to generate revenue from its assets. Disney's asset turnover rate is 43.45%, which means that for every dollar of assets invested in the company, it brings in about 43.45 cents in revenue. This ratio demonstrates Disney's reasonable efficiency in the use of its assets, but a comparison to industry standards is necessary to get a full picture of its performance. In this aspect, Netflix Inc. leads with an asset turnover ratio of 69.30%, meaning Netflix may be more efficient at converting assets into revenue. This comparison reveals that Netflix's asset management and revenue generation strategies may be more advanced or effective than Disney's.

In conclusion, the profitability of the Walt Disney Company shows that the fundamentals of its business are quite solid, which is supported by the company's high gross margin and effective asset utilization efficiency. Still, the company's relatively low net margin may suggest room for improvement in cost control or revenue growth. Investors who prefer stability may prefer DIS while those who can tolerate higher risk level may prefer NFLX.

3. Valuation

3.1. Forecast

Table 4: Valuation index of DIS and its competitors.

Company Code	TTM P/E Ratio (Actual)	NTM P/E Ratio(Estimates)	PEG Ratio(Forecast)
DIS	27.33	21.59	1.25
SONY	15.35	14.54	NA
CMCSA	9.86	9.32	0.98
NFLX	51	33.53	1.48

The price-to-earnings ratio (P/E) is a fundamental financial indicator, it compares its market price per share to its earnings per share to evaluate the valuation of a company's stock by. Earning per share and price-earning ratio on stock prices, earning per share is net income ready to be shared with shareholders divided by the number of shares of the company [8]. It is a good tool to compare the intrinsic and market value of a company, predict the growing profit of a company, and measure the risk level at the same time. A high P/E ratio typically indicates that investors are willing to buy the stock of a company and the company is during its growing period. However, if it is too high, it may mean that the company is overvalued. As Table 4 shown, DIS has a P/E ratio of around 25, this number is actually very mild. Take TTM P/E ratio for instance, the figures for SONY and CMCSA are 15.35 and 9.86 respectively. This might imply that investors in the market sense some problems with these two companies and they do not tend to invest these two stocks. However, Netflix has an extremely high TTM P/E ratio of over 50, this suggests that people are attracted by its innovation, leadership, research input, etc., thinking that the company has a bright future and being confident about its profitability. At the same time, it is noticed that PEG ratio is another significant investing indicator. It is a combination of P/E ratio and a company’s expected growing profit. A company's P/E ratio should match its profit growth rate. If the PEG ratio is below 1, it may indicate that the stock is undervalued because investors pay a price per unit of profit lower than the growth rate of the company's profits. If the PEG ratio is higher than 1, it can mean that the stock of a company is

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overvalued. Disney's PEG ratio stands at 1.25, indicating that the valuation of its stock is reasonable relative to the expected growth rate of earnings. While the figure for CMCSA is 0.98, which is very close to 1, meaning that the market value can relatively correctly reflect its intrinsic value. The figure for SONY is NA because it has a negative earning per share growth rate, reflecting that there might be some uncertainties and fluctuation of the company's operation, which is a serious problem, investors have to think twice before investing. NFLX has a TTM P/E ratio of 51, which is extremely high as mentioned. This high figure implies the optimism of the investors in the market. This may be caused by a lot of reasons, like its unique stream media platform which is welcomed all over the world and its rapid expend. However, the NTM P/E ratio of 33.53,which is markedly lower than TTM P/E ratio suggests that investors are uncertain about the future. This expectation be proved by various factors, such as the rising competition in the relative industry, higher and higher production costs, and other challenges that the company may going to face. The overly high PEG ratio may imply the company is overvalued to a degree.

To sum up, if an investor prefers a company with a more stable prospect and a strong industry fundamentals, and is capable is tolerate a little risks, the investor is supposed to DIS. However, if the investor dislikes risk extremely, CMCSA may be a better choice. And for those who can stand higher risks and want to seek for higher profits, NFLX may be preferred.

3.2. Strategy & Risks

Here the potential risks for DIS are listed. Firstly, lack of growing potential. Nowadays, there is an obvious shift in the way people watch movies. People tend to be lazier and unwilling to go to cinemas to watch movies, instead, they prefer to stay home and what movies through the scream media, stream media transmission control is one of the most important technologies in mobile video surveillance systems. The most concerned issue of stream media transmission is the quality of service [9]. This is the reason why Netflix is warmly welcomed in the fast-paced society. Whether Disney can catch up the trend is essential to whether it has enough potential to develop.

Secondly, losses in the DTCI Segment. As mentioned before, although Disney's DTCI segment is getting better year by year and gain profits in a diversify of ways, it is still suffering a noticeable loss, whether Disney can carry out more new motivated measures matters. Furthermore, overvaluation is another important problem. As mentioned before, the PEG ratio of DIS is more than 1, though it is not as serious as that of NFLX, it is still a problem. Investors need to consider carefully whether it is still a good opportunity to invest in the period.

At the same time, practical measures are as followed. Firstly, expansion and enhancement of streaming services may bring some benefits. In order to meet the changing taste of people, it has to expand its stream services, enhancing user experience through technology upgrades and personalized recommendations. Explore international markets to boost subscriber growth and diversify revenue.

Secondly, maximizing theme park and resort revenue is another good approach. It is the theme park the set Disney above. With the unique approach to generate revenue, it is a wonderful opportunity for Disney to build its brand and attract more tourists around the world. It is the basic segment of the company and a stable way to maintain its profit. Finally, digital transformation and innovation do benefits as well. People live in the digital era, only by constantly integrating the products with the digital era can meet the requirements of the age, otherwise it can only be like many companies, they refuse to innovate in order to maintain the sales of the original products, leading to the final bankruptcy. At the same time, companies are suggested to use digital technology to disclose corporate information in a timely, comprehensive and objective manner, and provide high-quality information to investors and analysts [10]. Therefore, digitalization new is a must for a company in the modern society.

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4. Conclusion

To sum up, there are both opportunities and risks when investing DIS. The positive part is that DIS has a diversity of income sources, including theme parks, media network, movies and stream media like Disney+, and these various methods provide DIS stable income. Meanwhile, DIS is doing their best to maximize their potential of stream media service, enhancing international influence, and diversifying the company's income. Furthermore, theme parks operation is still the most stable income source, bringing a lot of benefits to the company's profitability.

However, there are also lots of risks that deserve considering. Firstly, the industry of entertainment is developing all the time. The developing of stream media and Digital trend bring many challenges to the traditional cinema market. DIS has to adjust the new standard of customers and meet their requirements to keep innovating to keep the edge in the market. Secondly, although the DTCI unit showed improvement, it still faced losses, it is the significant moment to carry out new policies to make this segment bring benefits again. Furthermore, there are also some concerns of overvaluation. For instance, the PEG ratio is over 1, although that is not as serious as some of its competitors like Netflix, indicating investors should evaluate the investment choice carefully.

All in all, investing in Disney offers the potential for steady growth and profitability, especially through strategic initiatives such as expanding streaming services, maximizing theme park revenue, and embracing digital transformation. However, investors should be mindful of the risks posed by industry disruption, persistent losses in certain sectors, and possible excessive valuations.

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The Impact of ESG Factors on the Firm Valuation

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Abstract: ESG has gradually become a concern for firms, shareholders and stakeholder groups. ESG considerations have become increasingly important for firms, shareholders, and stakeholder groups. This article explores the impact of environmental, social, and governance (ESG) factors on a company's valuation, by first highlighting the growing importance of sustainability reporting and ESG considerations for investors. Four main points are concluded throughout the article. Studies conducted in various countries, such as Korea, Malaysia, and China, have consistently demonstrated a positive correlation between ESG ratings and a company's value and profitability. By prioritizing ESG performance, companies can reduce their exposure to compliance risks, thereby improving risk management and consistency. Long-term ESG investment can enhance shareholder value by boosting financial performance and mitigating risks associated with climate change and social responsibility. Additionally, ESG strategies can help companies build a strong reputation and foster consumer loyalty, as they address risks related to climate change and societal expectations regarding social responsibility.

Keywords: Investor Expectation, Risk Management, Brand Reputation

1. Introduction

Sixty four percent of the N100 companies reported sustainability ten years prior, sustainability was reported by 79% of N100 enterprises in 2022. The percentage of N100 corporations that report on global sustainability has been steadily rising, and nearly all of the top 250 firms in the world currently report on sustainability [1].

An increasing number of public companies are now publishing annual sustainability reports due to the growing interest of institutional investors in a firm's environmental risks, social practices, and governance before making investment decisions. This is crucial as institutional investors now play a significant role in modern capital markets. According to a report by the OECD (2019), institutional money managers controlled over 40% of the global public equity market capitalization by the end of 2017 [2].

Another reason appears to be the suggestion by corporate CEOs to prioritize maximizing stakeholder value rather than solely focusing on shareholder value [3]. Freeman's stakeholder theory, introduced in 1984, argues that successful companies should not only be accountable to their shareholders, but also to the wider community, employees, and customers, in order to ensure long-term sustainability. These stakeholder groups both influence and are influenced by the actions of the company. The actions taken to address the needs of these stakeholder groups are commonly referred

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to as corporate social responsibility (CSR), which McWilliams and Siegel's study defined as "actions that go beyond what is legally required and appear to benefit society as a whole".

Whatever the cause, the rising rates of sustainability reporting indicated that businesses were becoming more conscious of the notion of sustainability. Rating agencies have employed Environmental, Social, and Governance (ESG) since the mid-1900s. The letter "E," which stands for "environmental," indicates how the company affects the natural ecosystem. This includes emissions, waste and pollution, efficient use of natural resources, and creative product design that takes the environment into consideration. S stands for social, and it gauges how businesses relate to their employees, clients, and society at large. This includes initiatives to guarantee employee well-being, safety, and diversity, as well as customer satisfaction and good community behavior. Lastly, G stands for governance, which covers bribery and fraud, administration of compensation policies, shareholder rights, and board composition [3]. The idea of ESG was initially introduced in the United Nations Principles for Responsible Investment report, which suggests that investors should prioritize ESG scores when making investment choices.

Given that investors are increasingly valuing a company's social responsibility, ESG assesses companies based on three criteria, providing a somewhat comprehensive picture of the company that investors want. A growing body of recent research indicates that strong ESG performance may contribute to increased business value. After matching and filtering, the final panel data comprised 14043 firm year observations. Aydoğmuş, et al. picked the largest 5000 publicly listed corporations in the world from the Bloomberg database spanning 9 years. With a coefficient of 0.008 and 0.049, respectively, the results demonstrate a positive and highly significant association with company value and profitability [4]. Comparable research also shows that ESG benefits businesses in a variety of ways; therefore, businesses should prioritize how ESG affects their long-term viability, profitability, and valuation.

2. Investor Expectation

Recent studies conducted in different parts of the world, such as Asia, have consistently demonstrated a significant and positive relationship between ESG ratings and the value and profitability of leading companies worldwide.

Korean scholars proposed a positive relationship between CSR and valuation in the Korean financial market. CSR, as defined by McWilliams and Siegel, refers to actions that exceed legal requirements and benefits the community. The scholars have utilized the total ESG score as the primary factor in assessing the comprehensive CSR performance of Korean companies. In particular, they have employed Ohlson's valuation model, which incorporates non-accounting factors that hold value, in conjunction with Barth and Clinch's adjusted model for testing purposes [5]. Barth and Clinch's valuation model relies on two key variables, equity book value and earnings, and also adjusts Ohlson's financial factors to effectively mitigate scale effects [5]. The hypothesis was confirmed by the final result, however, it was found that the impact on share price can differ depending on the characteristics of the firm [5].

Motivated by the concern that the ESG index will affect market values of Malaysian listed companies, researchers conducted a study to explore how ESG practices influence firm value and the dual function of ESG disclosures in mitigating negative impacts and boosting positive impacts on firm value [6]. The data is extracted from 122 firms listed on Bursa Malaysia from 2011 to 2019 [6]. In order to determine the endogeneity of ESG performance, three instrumental variables are considered: the presence of a CSR committee on the Board of Directors, dispersion of forecasted earnings, and ownership concentration of the firm [6]. The researchers employed three first stage regression models to analyze the relationship between ESG disclosure and the interaction between the strength, concern, and disclosure of ESG [6]. Additionally, a second stage regression was

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conducted to examine the impact of ESG activities and disclosure on firm value [6]. The results indicate that a strong ESG performance enhances firm value, whereas ESG disclosure and concern have a negative effect on firm value.

A separate study conducted in China also confirmed that there is a positive correlation between ESG performance and firm valuation. Additionally, this research further supports the stakeholder theory proposed by Freeman, which advocates for maximizing stakeholder value. This study used data of disclosed ESG-related quantitative data of Chinese A-share listed companies from 2010 to 2019. Scholars utilized a hierarchical ESG scoring system to assess firms' overall ESG performance and the three individual dimensions: E, S, and G [7]. Then, using unbalanced panel data from 2010 to 2019, consisting of 3069 observations, the study examined the influence of ESG performance on firm value, with Tobin's Q (TQ) and Return on Assets (ROA) serving as indicators of firm value [7]. Beside the result of positive relationship between ESG performance an firm value, the research also concluded that the effect of ESG composite performance on firm value is different for state-owned companies compared to non-state-owned companies [7]. For state-owned-enterprises, the relationship between overall ESG performance and company value is stronger, while for non-state-owned-enterprises, the relationship is weaker [7]. State-owned enterprises have a more significant relationship between comprehensive ESG performance and corporate value, with a clear positive relationship regardless of the proxy variable used for corporate value [7]. On the other hand, non-state-owned enterprises only show a statistically significant relationship between ESG performance and company value when market value (TQ or MB) is used as a measure of company value [7].

All of the three research above show the same conclusion of ESG rating positively affects one firm's corporate valuation. The following article will discuss the importance of ESG performance on corporate valuation from another perspective–how ESG performance can reduce exposure to compliance risks, thereby achieving risk management consistency.

3. Risk Management

With the introduction of the ESG concept, ESG risk has emerged as a significant concern for both investors and companies. This has led investors to reassess their portfolios and companies to potentially revise their operational plans in response to climate risks.

Gil Cohen's research on the influence of ESG risks on corporate value highlights two significant aspects of sustainability's impact on financial markets as a whole and portfolio construction [8]. Firstly, investors are increasingly prioritizing ESG issues and favoring companies that demonstrate awareness of these concerns and actively work towards mitigating sustainability risks. Secondly, a growing number of investment firms are publicly declaring their refusal to invest in companies that contribute to environmental harm [8]. In fact, as ESG performance is often used to measure corporate social responsibility (CSR). Conclusion from recent studies conducted by Menz in 2010, Albuquerque et in 2019 and Shih et in 2021 indicate that socially responsible firms generally experience lower costs of equity. Additionally, investing in stocks with higher CSR ratings can contribute to reducing the overall risk of a portfolio [9].

However, private investors may have a contrasting perspective compared to institutional investors. They believe that avoiding investments in high ESG risk stocks could negatively impact their portfolio returns and potentially lead to a significant loss of customers for the investment firm [8]. And not all firms are willing to allocate resources towards mitigating sustainability risks. While prioritizing environmental, social, and governance (ESG) issues may enhance the overall value of a corporation, it may not be effective for every firm. A study conducted in China in 2020 by Li et al. revealed that when firms start to adopt environmental regulations, CER (corporate environmental responsibility) would have a negative effect on firm value [10]. The study was designed to investigate the correlation between CER engagement and firm value using a sample of 496 China's A-share listed

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companies from 2008 to 2016. CER(corporate environmental responsibility) is now understood as the integration of environmental concerns into business operations to minimize waste and emissions, and mitigate negative impacts on the country's natural resources [10].

Beside the result of negative effect on firm value, the study also suggested that once environmental regulations are implemented at a certain level, Corporate Environmental Responsibility (CER) can actually improve firm value [10]. Other studies and examples could also support the view of ESG would reduce overall risks and thus enhance corporate value.

An example during financial crisis would strongly emphasize the role of ESG performance reducing exposed risks. Prior to the financial crisis in 2020 caused by COVID-19, research about the specific role of ESG performance during times of crisis was limited. At the beginning of 2020, a sudden and widespread financial crisis emerged due to a growing global health crisis. This led to significant declines in global markets, with China's CSI300 members dropping to 4600 points.

The research, led by David C. Broadstock, focused on analyzing ESG data from China's CSI300 companies during the COVID-19 pandemic [11]. Trading activity for CSI300 companies increased significantly during the pandemic, with both high and low ESG firms experiencing heightened trade activity. However, low ESG firms saw a particularly significant increase in trading. This indicates that high ESG firms were more resilient during the pandemic, as investors were more patient and less likely to sell their shares to avoid losses in the volatile market [11]. Researchers use an empirical asset pricing model to analyze the impact of ESG factors during times of crisis compared to "normal" times. They incorporate information from the same period one year ago and introduce a dummy variable post to account for changes in both intercept and slope. The findings indicate that the COVID-19 pandemic had a significant and detrimental effect on the market. In all model specifications, there was a noticeable and negative shift in the intercept. According to the alternative hypothesis, during times of crisis, ESG investors place greater importance on a company's ESG performance. When a crisis event affects the entire market, investors have lower expectations for future earnings. However, they may have more confidence in companies with a stronger ESG profile. The overall findings showed that companies with strong ESG performance were better able to manage financial risks during the crisis [11].

4. Long-Term Strategy and Reputation

The preceding sections of the article have demonstrated that ESG performance improves corporate value and reduces overall risks within a company. In the following section, we will delve into the benefits of long-term ESG investment. The studies and examples mentioned earlier in this article all support the notion that long-term ESG investment yields greater value for shareholders. Furthermore, we will explore the significance of ESG strategies in establishing a strong reputation and fostering consumer loyalty.

ESG investment can be a powerful tool in maximizing long-term benefits for shareholders. The performance of a company in terms of environmental, social, and governance factors directly impacts its financial health, which in turn affects shareholder value. Historically, metrics like profitability have been recognized as key drivers of shareholder value, as noted by Rappaport A. in 1986 and Bistrova J. in 2014. In a study conducted by Zumente I. and Bistrova J. in 2021, it was found that high ESG performance has a significant impact on financial factors, leading to improved financial performance and stock returns. This ultimately results in higher value for shareholders [12].

Besides financial considerations, sustainable investing offers strong incentives for risk reduction. Research has shown that as climate change and growing societal expectations around social responsibility pose significant risks for companies in the future, it is crucial for businesses to prioritize sustainability in order to mitigate these risks, and thus protect shareholder value over the long term. Additionally, capital allocation is the crucial for investors, banks, and other capital providers support

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the development and growth of sustainable companies. Companies with lower ESG scores facing pressure from capital providers indirectly benefit their higher-scoring counterparts. Top ESG companies are more likely to attract capital and are more efficient in allocation, leading to lower costs of equity and debt and ultimately increasing long-term shareholder value [12].

Another study the article discussed earlier about the role of ESG performance during financial crisis also supports that long-term ESG investment will be beneficial. Efforts including environmental management system certification, water conservation, energy efficiency, waste gas emission reductions, and reducing accidental waste and spills help mitigate long-term environmental risks, Broadstock et al. [11]. Consequently, This supports the idea that ESG investments should be viewed as long-term strategies.

To provide further evidence of the effectiveness of long-term ESG investment, this article will examine a study that highlights the positive impact of ESG strategies on stakeholder relationships [13]. The study underscores the significance of incorporating ESG practices to establish trust with stakeholders and maintain customer loyalty. It delves into the various facets of ESG and their effects on corporate reputation, brand image, and consumer behavior. Additionally, the study provides compelling arguments for companies to integrate ESG strategies into their long-term business plans: To begin with, risk management. In order to effectively manage their reputation, companies should focus on building a positive brand image through ESG activities. This will help create a favorable perception among the public, ultimately enhancing the firm's reputation. Furthermore, investors often rely on ESG ratings to make investment decisions. Therefore, it is crucial for companies to prioritize long-term ESG investment in order to mitigate risks and ensure sustainability. By doing so, companies can attract more investors and strengthen their ability to secure funding. Lastly, companies that demonstrate satisfactory ESG performance are more likely to meet consumer preferences and expectations. This leads to increased customer loyalty, as consumers are more inclined to support socially responsible firms. Ultimately, the more socially responsible a company is, the larger its market share is likely to be.

The authors also proposed that organizations should take certain steps to develop and incorporate a comprehensive ESG strategy into their operations. These steps include creating a strategic road map and ensuring its thorough implementation, as well as establishing a strong communication strategy [13].

5. Conclusion

The paper proves that ESG has an overall benefit on firms, shareholders, and the stakeholder group. Specifically, strong ESG performance strengthens corporate value, and mitigates overall risks. Long-term investment in ESG also shows the potential to enhance shareholder value, establish better firm reputation, and foster consumer loyalty. It is valuable to refer to this article when one is doubting the effectiveness of the role of ESG on firm’s overall growth: While initial investments in ESG may not immediately show positive effects on corporate value, the long-term benefits far outweigh any initial challenges. Companies with good ESG performance demonstrate resilience during financial crisis, which build up consumer loyalty in the existing investors, thus the low risks would eventually enhance shareholder value and gain a good reputation for the firm. The overall ESG performance is very likely to attractive more investors in the long term and build up consumer loyalty. In fact, long-term ESG investment is cost-efficiency, which brings countless benefits.

The article shows some space for improvement. The conclusions drawn are based on general concepts, while the referenced articles focus on specific types of firms and their ESG effects. For example, the impact of CSR on share price in Korean firms varies depending on the firm's characteristics. Companies in environmentally sensitive industries tend to have a lower value creation from CSR compared to those in non-sensitive industries. Specifically, corporate governance practices

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negatively affect the firm value of environmentally sensitive companies. Furthermore, the studies cited in the article come from different time periods, regions, and types of firms, making it less effective for comparing similar companies in different areas. According to the possible limitation, there are expectations toward future studies. More research should be done on identical types of firms across various areas and time periods, and do the same thing on other types of firms. This will help industries gain confidence in ESG investment and achieve long-term cost efficiency.

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An Analysis of Luckin Coffee's New Marketing Model from the Perspective of Behavioral Finance

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Abstract: With the development of Internet technology, Luckin Coffee has transformed the traditional value creation model, driven by customer value as the goal, and established its brand effect in a short period of time through financing. However, the excessive and rapid expansion led to financial crisis, which caused it to fall into the negative vortex of financial fraud, and finally returned to the consumer market at the cost of delisting and restructuring in the United States. After returning to the market, Luckin Coffee changed its business operation model, and the reform of the new marketing model focusing on products and customers made its financial turnaround and rebuilt its brand value. How does Luckin Coffee take advantage of consumers' psychology and guide their consumption preferences? Based on the perspective of behavioral finance, this paper analyzes how the operation management team of Luckin Coffee reconstructs its marketing methods and paths by utilizing the anchoring effect of consumers, limited attention transactions and herd effect. The research conclusion shows that the new marketing model with consumer demand caused by consumer psychology as the core can effectively and rapidly increase the number of new customers and improve customer retention. Luckin Coffee has also quickly passed the crisis after delisting and restructuring, and its business performance and corporate value have also gradually increased. The brand value has returned to the vision of consumers, and the future is promising.

Keywords: Luckin Coffee, Behavioral Finance, Anchoring Effect, Herd Effect

1. Introduction

The development of Internet technology has given birth to the business model of new retail. Based on the Internet platform, enterprises use new Internet technologies such as big data and cloud computing to fully integrate online sales, offline experience and logistics distribution. In addition, enterprises can also use the new technology of the Internet to release new products, provide new services and expand new channels, and comprehensively enhance the sales and corporate value of enterprises.

Luckin Coffee was established in Xiamen in October 2017. At the beginning of its establishment, with the vision of "creating a world-class coffee brand and making Luckin a part of People's Daily life", Luckin Coffee made full use of Internet technology and chose a new retail model of "online + offline" to ensure a good consumer experience for customers. After its establishment, Luckin Coffee Company has maintained rapid development. From its official operation in May 2018 to 2019, the number of stores has exceeded 4,500, surpassing the total number of stores opened by Starbucks in

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China for the first time. New retail methods and the rapid expansion of stores have also been favored by the capital market, with financing reaching 2.65 billion yuan in 2018 and 5.59 billion yuan in 2019. In May 2019, it went to the United States to list on the NASDAQ market, 19 months after the company was founded, and the highest share price of the company reached the peak of $51.38 in January 2020.

However, in January 2020, Muddy Waters Fund issued a short report directly pointing to Luckin coffee data fraud, in April 2020, Luckin Coffee announced the announcement of adult financial operation fraud of 2.2 billion yuan, and then the stock price plummeted 80%, and the market value instantly evaporated nearly 5 billion yuan. What followed was an apology issued by Luckin Coffee, penalties from the domestic Securities Regulatory Commission, the US investment market and investor lawsuits. On June 29, 2020, Luckin Coffee suspended trading on NASDAQ and delisted for filing, entering the over-the-counter market.

After the financial fraud and delisting restructuring, Luckin Coffee did not withdraw from the market. After the governance of the company's equity structure, the company adjusted its business strategy to take "product quality and customer value" as the goal and improve customer demand as the core competitiveness [1]. Based on consumers' psychology and consumption preferences, it made new adjustments to the marketing model [2]. Luckin Coffee's turnover is rising year by year, the amount of loss is also shrinking, and in the first quarter of 2022, the first time to turn a profit, the total net income of fiscal year 2021 is 7.965 billion yuan, an increase of 97.5% compared with the fiscal year 2020 [3].

Behavioral finance is a discipline based on the perspective of psychology to explore how people make decisions with psychological biases and preferences, and how they affect investment behavior, and finally how they affect the value of assets. How does Luckin Coffee's new operating model make use of consumers' psychology and consumption preferences to adjust, and finally affect the value of the enterprise? This paper will make use of the anchoring effect, limited attention transaction and herd effect of consumers in behavioral finance to discuss how the operation team of Luckin Coffee takes advantage of these deviations of consumers' transaction behavior to adjust and reform the marketing model, so as to better acquire customers and improve customer retention, and rebuild the brand value.

2. The Anchoring Effect of Consumers

Since its inception, Luckin Coffee has been aiming to create low-cost high-quality coffee as its main product goal. Existing young white-collar consumers continue to take "cost-effective" as the anchor point. Although Luckin has experienced financial fraud leading to delisting, the coffee quality in stores has not declined, and the anchor point of "cost-effective" is the reference point that existing consumers care most about Luckin Coffee [4]. It is like an anchor that restricts the consumption habits of these old customers, because even after the delisting reorganization of Luckin, these young old customers continue to buy Luckin coffee.

College students are also a group of young people, and young white-collar workers are the roles they will become when they enter the society. Luckin Coffee regards young white-collar workers as the anchor point of the whole consumer group, and opens more stores on or around the university campus or in the university city. By taking advantage of the anchoring effect of young college students, when college students consume drinks, they will be able to enjoy the coffee. They will unconsciously take the consumption habits of the characters they are about to become as a reference point, which restricts their consumption like an anchor. When Luckin Coffee has always taken "cost-effective" as the core competitiveness of the product, and the price is within the range of college students' consumption, college students also begin to buy Luckin coffee as a supplement to their drinks [5].

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3. Limited Attention Transactions of User Consumers

Since its inception, Luckin has been committed to how to acquire new customers and quickly occupy market share as the goal, and has held a variety of marketing activities to take advantage of the limited attention of investors and maximize the public and private traffic of consumer groups [6]. Investors' limited attention trading is a manifestation of investors' trading behavior deviation in behavioral finance, which means that investors can only choose the assets they are interested in or conspicuous when choosing investment targets due to their limited energy [7]. When a consumer chooses a coffee drink, it can be regarded as an investment in his (her) consumption of drinks, if the consumer has no inclination, she (he) will choose the products that they often advertise, various media and have coupon activities. Luckin Coffee is taking advantage of the limited attention of investors trading bias, before the listing on the focus on Luckin brand promotion advertising.

In the early stage of Luckin's listing, Luckin first invited famous Chinese actors Zhang Zhen and Tang Wei as spokespersons, and successfully exported Luckin's brand positioning as "high-quality commercial coffee" to the public with their independent business temperament. In 2019, it invited Liu Haoran, the younger brother of Chinese actor Guomin, to be the new brand spokesperson, and targeted the consumer group at "office young people" with a number of new products of deer tea. Even after the delisting storm, Luckin did not give up the use of star effect for advertising to promote the brand. In September 2021, Luckin cooperated with sports star Gu Ailing to launch two types of coffee related to the main body of Winter Olympic sports, namely ski latte and Sa snow Latte, promoting the concept of sports health and so on, and shifting the brand positioning to more young people. When they make use of these obvious spokespersons, they will carry out a variety of online and offline marketing activities around these spokespersons, such as subway, elevator, shopping mall and other public scenes, which are covered with paper electronic screen advertisements of Luckin; Online sweepstakes such as signature photos of gift cards designed using the spokesperson's photo. The overwhelming advertising has attracted the attention of consumers to a great extent, making more consumers know the brand of Luckin Coffee, and the star halo sought after by the public has also established a good brand image of Luckin Coffee in the minds of consumers.

Luckin coffee in addition to open the brand awareness in the way of cooperation with the star, in the public consumer area has obtained a huge customer base, after the delisting storm, Luckin's brand has also been questioned by consumers. In order to let the eyes of consumers return to the brand of Luckin once again, the operating officer of Luckin has used more refined operation channels to attract the limited attention of old customers more accurately, and will focus more on customer retention, introduce customer traffic from the public domain to the private domain, and increase customer retention [8]. Luckin has frequent access to users through the offline consumption environment of many stores, such as the dining table, checkout counter, poster, coffee bottle, etc., and the online hot ecology, such as the enterprise Wechat group with Wechat as the main body, Wechat mini program, popular short video platform, Luckin Coffee APP, etc., for new products and coupon activities on the platform. These online Internet ecology has become the daily way of mass consumption, Luckin Coffee has officially made use of the consumption scene which is highly coincident with the consumption habits of the public, especially young people, and greatly improved the attention of investors with omnipresent marketing [9]. This new private marketing model has made Luckin add more new consumers and encouraged more old customers to buy again.

Another way of Luckin Coffee to attract consumers' attention is to cooperate with major famous brand IP and constantly launch innovative explosive products. In April 2021, the raw coconut latte launched by Luckin Coffee was loved by young consumers, and the sales volume exceeded 100 million cups on the first anniversary of its listing. In April 2022, Luckin took advantage of the position of the old national beverage brand Coconut Tree Group in the hearts of mass consumers, and jointly

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produced coconut Cloud Latte with Coconut Tree Group, which sold 660,000 cups on the first day of listing. It sold 4.95 million cups a week, and its total sales exceeded 81 million. Coconut Group is a 68-year old enterprise in the Chinese beverage market, which has a large number of loyal customers and a good public reputation in the Chinese consumer market. In cooperation with Luckin Coffee, we make use of consumers' nostalgia and novelty, and attract more middle-aged and elderly customers to make new attempts for the brand in their hearts. In April 2024, after raw coconut latte, meteorite latte, thick milk latte and other raw coconut latte products were loved by consumers, Luckin struck while the iron was hot, and once again cooperated with the famous IP spirit Day Group of the first batch of Bubble Mart, a domestic blind box enterprise in China, to launch a limited number of new coconut Emperor latte, again taking advantage of the huge consumer fan base of Bubble Mart brand. Attract their attention to get more consumer attention, expected to achieve the next hot product.

Luckin Coffee's most successful co-brand product, which has taken advantage of limited investor attention, has been the sauce-flavored latte. This product is jointly launched by Luckin Coffee and Moutai Company. First of all, Moutai Company is a leading enterprise in China's liquor industry and the most expensive stock in China's financial market in the capital market. Its liquor is of high price and good quality, and its consumption is a symbol of status in China, which is sought after by the public. And coffee and liquor drinks are also the first time to appear in the public's vision, this new concept of coffee and the brand effect of Kweichow Moutai company, once launched in the market caused an uproar, greatly attracted the attention of many liquor lovers, coffee lovers, ordinary consumers and curiosity psychology, the day before the market on September 5, 2024, The cumulative volume of public opinion related to " sauce-flavored latte" has reached more than 512,000, the relevant amount of attention on short video platforms has reached 23,000, and the amount of attention on Weibo platforms, forums, and self-media accounts has reached more than 270,000, which has gained great attention from various consumer groups and accumulated a large number of potential consumer customers. On the first day of the soy sauce latte listing, the daily sales volume of sauce-flavored latte single product stood out 5.42 million cups, and the sales volume exceeded 100 million yuan on the first day, so the heat has not decreased, and it has once again become the phenomenon of Luckin Coffee explosive product.

From the perspective of behavioral finance, the evolution of Luckin Coffee's marketing model has changed from the initial way of cooperating with famous stars, issuing coupons and discount coupons to attracting more customers in the public domain, to the transformation of public domain customers through more refined Internet multidimensional private domain traffic, and repeatedly cooperating with famous IP to innovate and sell co-branded products [10]. It is closely related to the fact that Luckin Coffee marketing team is well aware of consumer psychological deviations and makes great use of consumers' limited attention to transactions. The multi-dimensional marketing approach of Internet ecology enables consumers to access Luckin coffee in various daily life scenarios. When consumers find it difficult to choose among various coffee drinks due to limited energy, the availability bias of consumers enables them to choose conspicuous and easily available information for decision-making while consuming less information searching [11]. Therefore, it increases the possibility of consumers choosing Luckin coffee and the re-purchase rate of old customers. The product launch of the joint venture with the famous IP has greatly attracted the already huge fan base of the co-branded IP, and consumers will increase their willingness to try and pay for the co-branded product due to their love for the co-branded IP when making decisions according to their emotional inspiration bias. The continuous cooperation with famous IP has kept Luckin Coffee brand's attention in the hearts of consumers, attracting more new customers to join, while preserving the retention of old customers. Even after delisting and restructuring, it still attracts more customers through these ways, coffee sales and turnover have been rising year by year, and in the second quarter of 2022, it will turn a profit. Total revenue reached 3.299 billion yuan, up 72.4% year-on-year.

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4. The Herd Effect of Luckin Coffee Consumers

First of all, in the marketing of each new product, Luckin Coffee has added more social attributes in addition to the commodity attributes of the product, which has generated a herd effect among different consumer groups and expanded the consumption of Luckin coffee. Whenever Luckin Coffee develops a new product, the company will certainly promote it on major Internet platforms, especially in social media marketing. The search volume of Luckin's new product can almost exceed 10,000 on Wechat, Xiaohongshu, Douyin and other short video platforms, which are the largest and most convenient social platforms on the Internet in China. Many young people find the same fashion and trend life elements in the consumption of Luckin coffee. Luckin coffee has become a conversation and connection for young people. In the consumption of soy sauce lattes, many middle-aged people, when consuming baijiu flavored coffee, link the emotional exchange of Moutai liquor consumption experience, which enables the public to have a sense of identity and belonging when consuming Luckin coffee [12]. In order to obtain such a sense of identity and belonging, more consumers will be able to buy coffee. Even if there is no coffee consumption habit or no consumption preference for Luckin coffee products, they will choose to follow the consumption habits of others.

Secondly, the sales of Luckin's new products bring positive value to the Luckin coffee brand, and consumers are optimistic about this. Under the premise that the quality of Luckin coffee is guaranteed, the optimistic mood is contagious among consumer groups, and more consumers will choose to consume Luckin coffee in order to support domestic coffee brands.

5. Conclusion

From the perspective of behavioral finance, this paper discusses how the operation team of Luckin Coffee, after the delisting and restructuring storm, takes "product quality and customer value" as the goal, analyzes consumers' consumer psychology and habits by using the anchoring effect of consumers, limited attention transactions and herd effect, adjusts and changes the marketing model, and finally improves the core competitiveness of the enterprise. It has achieved a turnaround against the wind and reshaped the brand value. The change of Luckin Coffee's operating model shows that the shaping of corporate brand value should ultimately return to improving product quality and customer satisfaction, so as to deeply explore customer needs and develop products according to consumer preferences in order to truly improve customer stickiness and truly enhance brand value.

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Revenue Model of Professional Tennis Players Signed under IMG Sports Brokerage Firm

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Abstract: In the context of the flourishing professional tennis leagues and the increasing prominence of commercial value, how to effectively cultivate and promote tennis players has become a focal point for the sports industry and the agency sector. Employing case analysis and literature review methods, this research delves into the training costs and income sources of tennis players, as well as the role of sports management companies in this process. The study initially points out that nurturing a top-tier tennis player requires substantial financial input. However, once the athlete achieves significant success, the returns are highly lucrative, primarily deriving from competition prize money, brand sponsorships, and revenues from commercial activities. Sports management companies, such as IMG, play a crucial role in the selection, training, and commercial promotion of athletes. Through their professional operations, they significantly enhance the commercial value of the athletes. The study provides a detailed analysis of how sports management companies systematically cultivate athletes and maximize their commercial value through diversified means. The findings indicate that the involvement of sports management companies is crucial for enhancing the commercial value and competitiveness of athletes. Addressing the current situation of training and agency management for Chinese tennis players, this paper proposes several recommendations, including improving the legal framework, promoting diversification in sports training, and implementing a "trinity" training mechanism, etc. These recommendations aim to promote the holistic development of Chinese tennis players and advance the standardization and professionalization of the tennis agency industry.

Keywords: Professional Tennis Players, Sports Economics Companies, Tennis Player Commercial Value

1. Introduction

Cultivating an elite tennis player is an intricate process. It requires substantial economic investments in various aspects, such as facilities and sports equipment, and in developing athletic tactics, physical fitness, and psychological qualities—all of which entail significant financial costs [1]. However, the returns can be quite substantial if a player achieves commendable results. Presently, the professional tennis circuits, ATP and WTA, rank over a thousand players globally, with the men's rankings extending to 1,932 and the women's to 1,181. The tournaments include, for example in the year 2023, four Grand Slam events with an average total prize money of USD 50 million, nine Masters

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tournaments with prize money ranging approximately from USD 7 million to USD 19.5 million, ATP/WTA 500 events with total prize funds roughly between USD 2.25 million and USD 11.75 million, and ATP/WTA 250 events with prize funds approximately between USD 1 million and USD 5 million. In addition to competition prize money, athletes can increase their income through brand sponsorships and participation in commercial activities. Most players opt to sign with sports economics companies to manage these affairs, allowing them to devote more time and energy to training and competing. IMG (International Management Group) is a leader in this industry, operating in over 30 countries and regions across the entertainment, sports, fashion, and media sectors. The company represents some of the top stars in the global sports and fashion industries. In the realm of tennis, IMG manages notable players like Novak Djokovic, Maria Sharapova, Serena Williams, and Venus Williams. Moreover, IMG also manages and represents several major tennis tournaments globally, including the Sony Ericsson Open, the Australian Open, the Chennai Open in India, and Wimbledon, among other renowned events. Current research on the revenue models for professional tennis players presents two main perspectives within the academic community. The first perspective argues that these athletes rely on competition prize money and brand sponsorships. It is believed that professional tennis players must be directly linked to winning top-tier events, with substantial prize money distributed based on ranking. The second perspective holds that participation in commercial activities also constitutes a significant source of income for these tennis players, suggesting that an athlete's market impact and commercial revenue typically emerge within a professionalized context. The enrichment of media channels, such as television networks, enhances the visibility of tennis players while also providing opportunities to generate greater profits. The author notes that current literature lacks research on the business model involving tennis players signing with sports management companies, such as how some players are contracted to IMG Sports Economics Company, and how IMG effectively develops a player from youth to a professional career. This study primarily analyzes how tennis sports management companies cultivate tennis players and endow them with commercial value, and how China should develop and regulate tennis sports management companies. The author has reviewed a substantial amount of literature and information, and discusses the findings as follows.

2. The Maximized Commercial Value of Tennis Players

Many professional tennis players choose to sign with sports economics companies to receive assistance with competitions, training, and brand endorsements. Taking the renowned Chinese female professional tennis player Zheng Qinwen as an example, she signed with the top sports economics company IMG at just 11 years old and moved to the IMG Academy in Florida, USA, for training. Shortly thereafter, she secured a clothing sponsorship deal with Nike. As Zheng Qinwen's performance in international competitions improved, and under the management of IMG, she successively became the spokesperson for multiple international brands such as Rolex, Wilson, Alipay, and McDonald's. After the 2022 season, Zheng's year-end WTA ranking rose to 25th, which enabled her management company IMG to secure more sponsorship contracts for her. In addition to the previously mentioned sponsors like Alipay, Nike, Wilson, and Gatorade, she also attracted endorsements from brands like Yili and Svish, significantly enhancing her commercial value. IMG meticulously developed the commercial value of Zheng Qinwen, enabling her to match the number of commercial sponsorships of Coco Gauff, who was ranked 6th, when Zheng was ranked 25th in the WTA annual standings. According to Forbes, at that time, Zheng Qinwen's commercial value had already exceeded USD 2 million. By the 2023 season, Zheng's WTA year-end ranking had further improved to 7th place, and her annual income reached USD 7.2 million, of which USD 1.7 million came from competition prize money, while the remaining USD 5.5 million was entirely from the

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support of brand sponsors. This fully demonstrates the success of IMG in developing Zheng Qinwen's commercial value.

IMG has always paid close attention to the commercial potential of its athletes. On September 28, 2009, IMG announced the signing of China's top tennis player at the time, Li Na. Two years later, after Li Na won the French Open and achieved a historic breakthrough for Chinese tennis, IMG acted swiftly to assist her in signing endorsement contracts with up to 13 top brands, including internationally renowned brands like Rolex and Mercedes-Benz. These lucrative endorsement contracts, coupled with prize money from various tournaments and income from commercial activities, propelled Li Na to the top of the 2011 Forbes China Sports Wealth list with an annual income of 138 million RMB.

3. Case Analysis

3.1. Financial Status and Career Challenges of Tennis Players

Currently, professional tennis players in the league fall into three financial categories, the first includes players ranked within the top hundred who directly qualify to participate in the highly profitable Grand Slam events and can also play in major tours (ATP or WTA tours). These players earn enough to cover their expenses and sustain themselves through professional tennis. At this absolute peak, there is a significant disparity among the top players. However, this is evident in many winner-takes-all sports, where the absolute top players achieve superstar status. This phenomenon has been widely accepted by athletes in the sports industry. The second financial category includes players ranked between 200 and 250 in the league. These players are eligible to participate in the qualifiers for Grand Slam events and ATP or WTA tours, as well as in ATP Challenger Tour events or ITF Women's Circuit matches. Consequently, they earn a modest income, which more or less covers their expenses. Players in the third financial category are typically ranked below 250th. Their financial situation remains below the break-even point, and they suffer losses from playing professional tennis. Staying in this condition for an extended period without any signs of breaking through could mean investing in one's career without adequate returns. This would create an unsustainable financial situation and a significant financial burden [2]. One potential reason for this scenario is that the total prize money available is diluted among too many professional players under the current model. Specifically, approximately 200 players (regardless of gender) earn a reasonable income from professional tennis, yet this creates an untenable economic model for over 4,000 players who continuously face financial losses. Of course, professional tennis league organizations cannot and need not be responsible for the income of all players, which is determined by the revenue generated from their fan base. What they should focus on instead is ensuring that players who perform well and have potential can secure a stable income.

3.2. International Trends and Domestic Status of Tennis Commercialization

In the commercial aspect of professional tennis circuits, sponsorships, television broadcasting rights, and prize money are crucial for the prosperity and advancement of professional tennis. Sponsorships not only provide financial support for tournaments, players, and league organizations but also serve as an important window for brand promotion and exposure. Television broadcasting rights enable the matches to be widely disseminated, attracting fans from around the globe, and these rights also generate substantial revenue through advertising and media partnerships. Tennis has a massive global footprint, in addition to professional players, there are an estimated 81 million amateur players worldwide. Sporting goods manufacturers sell billions of dollars’ worth of equipment on the back of tennis icons, and companies pay hefty fees to prominently display their logos on international television broadcasts [3]. Prize money serves to motivate players to give their all and ensures that

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tennis remains an attractive career choice. A fair distribution of prize money enhances the inclusiveness of the sport, thereby promoting the comprehensive development of tennis. These commercial elements collectively build a bridge for players, sponsors, broadcasters, and fans to engage with tennis, laying the foundation for the sport's global influence and sustainable growth [4]. Unlike team sports such as basketball and soccer, tennis is a highly professionalized and commercialized individual competitive sport. Therefore, many tennis players are targeted by brands at a young age. For some outstanding young players, major brands quickly secure their commitment through early contracts. Even if players achieve sudden, remarkable success and their market value skyrockets years later, these major brands not only retain the athletes but also possess the capability to match any offers. Some particularly successful young tennis players directly sign contracts with sports economics companies. Major agencies possess abundant resources and advanced experience in finding and selecting sponsors, negotiating contracts, managing and shaping the player's brand image, as well as planning competition schedules, training facilities, and assurances, even providing access to top specialist physicians for the players.

3.3. Development and Challenges of China's Tennis Brokerage Industry

However, this model has not yet become widespread domestically. Under China's state system for managing tennis athletes, the sports management system is not fully marketized, and most Chinese tennis players are managed by the government, with their personal freedoms restricted. In contrast to the comprehensive domestic system, tennis sports abroad generally involve athletes independently bearing economic risks and possessing financial independence. Compared to this, domestic tennis in China is in a semi-professional state, with athletes largely supported and funded by the state. Currently, there is a lack of top-tier sports economics companies in China that can assist players from their youth in finding sponsorships, providing training conditions, and planning their career paths. Currently in China, agents are primarily concentrated in the entertainment industry and are relatively skilled. However, the situation differs significantly when it comes to sports agency, particularly in the field of tennis management. Due to limited growth opportunities in the Chinese sports agency industry and contradictions between the training of agents and their practical work, the management system for tennis agents is not yet mature, and there is a lack of self-discipline within the industry. As a result, the tennis agency sector in China is still in its nascent stage, with few practitioners, and their professional competence and business capabilities need further enhancement. Compared to large international agencies, there is a lack of competitiveness [5]. The training model for tennis players in China primarily relies on state-led initiatives, with enterprises, society, and families providing supplementary support. Thus, domestic athletes must pay a significant portion of their winnings and endorsements to the Tennis Management Center. Moreover, during the entire training process, due to the monopolistic control over resources by various training units, these entities form interest blocks and operate from a self-interested perspective. They do not view the different developmental stages of athletes as a system but rather fragment them, using athletes as vehicles to achieve their financial goals [6]. Thus, more institutions similar to IMG are needed to help Chinese tennis players' transition from youth to professional careers through systematic training, sponsorship, and planning.

4. Suggestion

China is currently experiencing rapid socio-economic development and a booming sports industry. The Chinese government's high level of attention and support for sports provides great opportunities for professional tennis. The rise of sports economics, proactive promotion of sports industry policies, and growth in national income create a favorable macro environment for the development of professional tennis in China [7]. However, there is a need for enhanced management and

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standardization in perfecting the system of professional tennis economic agencies and training outstanding tennis agents. The training method for Chinese tennis players, which has distinct Chinese characteristics, has contributed significantly to the enhancement of China's competitive tennis levels. Nonetheless, it cannot be denied that this athlete training and management system, heavily influenced by a planned economy model, is increasingly unsuitable for adapting to the demands of the global tennis market, which is characterized by marketization, professionalization, and commercialization [8].

4.1. Mechanism for Agent-Athlete Trust and Market Standardization

Relevant departments should further perfect the legal framework related to tennis economics companies, ensuring that all systems are effectively operational. The government, by establishing and improving mechanisms to prevent conflicts of interest, sets clear guidelines for the conduct of sports agents and stipulates that they cannot simultaneously hold management positions in clubs. This fosters a strong trust relationship between sports agents and athletes. Additionally, the supervision and management of the sports market should be strengthened. This includes improving the disciplinary system for misconduct, establishing ongoing training and continuous learning mechanisms for practitioners, and enhancing the transparency of financial management and investment information. Through these measures, the strategic requirements of the "Guidelines" can be better implemented, ensuring that the relevant systems fully exert their intended effectiveness.

4.2. Dual-layered Regulatory System for Tennis Agents

With the advancement of China's socialist market economic reforms and the trend towards socialization in institutional reform, the management of tennis agents should involve a dual-layered organizational structure encompassing both government and society. The government management structure should include the General Administration of Sports, the State Administration for Industry and Commerce, and various project management centers, as well as the sports and industry and commerce bureaus of each province and city. The societal organizational structure should include various individual associations, agent associations, and specialized tennis agent associations. To ensure standardized management of tennis agents, sports agency companies must be jointly supervised by these two types of organizations.

4.3. Enhancing Tennis Agent Professionalism via Strict Standards and Training

Tennis agents must pass specific qualification assessments to obtain their credentials. The government needs to standardize training management to enhance the professionalism of tennis agents. The Tennis Agents Association should verify the qualifications of practitioners, and only those who have passed the assessments administered by the State Administration for Industry and Commerce can be accepted as members of the association. Additionally, the association should also regularly conduct training and qualification certification activities [9].

4.4. Diversified and Collaborative Sports Training for Mutual Success

Within the sports training system, aside from independent education and training by sports colleges, the government can also collaborate with economic or other comprehensive institutions to create a diverse, multi-channel, and multi-type training system. Moreover, the state should actively encourage sports agents to engage with universities, promoting contracts between students and sports agents to facilitate meticulous planning for the students' future development. Utilizing the extensive social resources available to sports agents, students can more easily access professional clubs, thus contributing to the talent pool for China's ambition to become a strong sports nation.

4.5. "Trinity" Mechanism for Recruiting and Developing Tennis Elites

In the training of athletes, with the premise of maintaining national interest and balancing various interests, relevant departments adhere to the principle of "selecting elites and training broadly." They implement a special "trinity" mechanism for the selection, training, and management of talented tennis players, providing specialized training at the national level for athletes with extraordinary potential [10]. To attract more youth to tennis and allow them to share and realize personal benefits, relevant organizations have established multi-level, performance-based interest protection mechanisms to address the most pressing, direct, and realistic concerns of tennis athletes.

5. Conclusion

Currently, what sports management companies in China need is not simply clients and markets, but the ability to analyze environments and markets, grasp the trends of the times, and possess exceptional strategic foresight. The collaboration between IMG and professional tennis players represents a win-win business model. Through sponsorships, endorsements, product partnerships, and event collaborations, IMG can effectively empower professional tennis players, enhancing their visibility and commercial value. Moreover, this partnership model also aids IMG in boosting its image and expanding its market share. In future developments, the collaboration between IMG and professional tennis players will become even closer and more diversified, jointly advancing the development of the sports industry. Given the current characteristics of China's tennis market, the prospects for tennis agents are exceptionally broad. This paper provides reference information for young tennis players considering a professional career and uses examples of some players to demonstrate the immense commercial value of the ATP/WTA professional circuit, while also recommending that nations systematically and sustainably cultivate professional players. However, there are deficiencies in the collection of player income data in this study. Therefore, future research can further analyze and study the financial situation of some lesser-known tennis players.

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Empirical Analysis of Portfolio Allocation During Market Turbulence Based on Efficient Frontier

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Abstract: The global financial markets have experienced considerable turmoil due to the COVID-19 pandemic, in this context, portfolio management becomes critically important. This paper employs Monte Carlo Simulation to determine Efficient Frontier of a portfolio comprising fourteen US technology stocks in the period of COVID-19 pandemic by python, which also allocates portfolios for Minimum Volatility and Maximum Sharpe Ratio, along with their key parameters. According to this study, Maximum Sharpe Ratio portfolio outperforms Minimum Volatility portfolio in terms of cumulative return. However, it's important to note that Maximum Sharpe Ratio portfolio also experiences a greater maximum drawdown. Additionally, this paper visually depicts the optimal allocation of asset weights across different levels of risk aversion using a chart. Furthermore, it identifies NVDA as the optimal choice for investors who have low degree of risk-aversion due to its high volatility and expected return. Conversely, IBM and CSCO emerge as the preferred choices for risk-averse investors, as they effectively mitigate the portfolio's entire risk.

Keywords: Efficient Frontier, Sharpe Ratio, COVID-19 pandemic, Portfolio Allocation, Risk Aversion

1. Introduction

The COVID-19 pandemic has brought about significant turmoil and uncertainty in global financial markets [1]. During this period, panic among individuals triggered sustained plunges in global stock markets. Unprecedentedly, the US stock market experienced four "circuit breaker" triggers on March 9th, 12th, 16th, and 18th, due to the extreme market volatility [2]. Faced with the economic recession caused by the COVID-19 pandemic, the US government and other countries implemented large-scale fiscal stimulus measures [3]. The successful development and widespread vaccination of vaccines, along with improvements in corporate performance, boosted investor sentiment and greatly restored market confidence. Consequently, the US stock market rebounded significantly after a massive retreat [4].

In this context, portfolio management becomes more complex and crucial. Investors need to reassess the balance between risk and return to cope with market uncertainty and volatility. At the same time, investors need to remain vigilant and adjust their investment strategies promptly according to market changes.

This paper aims to match the optimal portfolio for investors with different risk-aversion levels by modeling and analyzing data from fourteen US technology stocks. Initially, Monte Carlo Simulation is utilized for determine the portfolio's Efficient Frontier. Then, Minimum Volatility and Maximum Sharpe Ratio portfolios are identified, and their related data are analyzed. Finally, the optimal investment portfolios for investors with different risk aversion levels are derived. The analysis and management of portfolios in this paper is of significant importance in reality, especially during periods of market volatility, which can help investors make better portfolio allocations.

The of the paper's remaining portion is organized in the following manner. Section 2 presents the data, empirical model, and results analysis. Section 3 shows some limitations. Section 4 concludes the study.

2. Model Formulation

2.1. Application of Markowitz Efficient Frontier

Nobel Laureate Harry Markowitz introduced the concept of the efficient frontier in 1952, which continues to be a core premise of modern portfolio theory. It assesses portfolio based on their balance of return (y-axis) and risk (x-axis). An investor's choices for balancing portfolio risks and returns are graphically illustrated by this efficient frontier [5].

The formulas of expected portfolio return and are as follow:

$$\mathrm{E}(R_p) = w_1R_1 + w_2R_2 + \cdots + w_nR_n = \sum_{i=1}^{n} w_iR_i \tag{1}$$

$$\sigma_p^2 = \sum_{i=1}^{n}\sum_{j=1}^{n} w_i w_j \sigma_{ij} \tag{2}$$

$\mathrm{E}(R_p)$ denotes the expected portfolio return, R_i denotes the expected return of the ith asset, σ_p^2 denotes portfolio's total risk which measured as variance, σ_{ij} denotes the covariance between the ith and jth assets, w_i denotes the weight of the ith asset in the portfolio, w_j denotes the weight of the jth asset in the portfolio and n denotes portfolio's total number of assets.

Modern portfolio theory's Efficient Frontier consists of optimal portfolios which offer the greatest expected return when a certain risk degree is taken into account, or the lowest risk when a defined expected return is taken into account [6]. Portfolios that are located beneath the efficient frontier are judged imperfect since they fail to give enough return regarding the quantity of risk taken. On the contrary, portfolios locate at Efficient Frontier's right side are also imperfect because more risk is borne for the expected return.

This paper constructs the Efficient Frontier of a portfolio using the daily compounded returns of fourteen US technology stocks, aiming to utilize the efficient frontier for risk management and asset allocation decisions.

2.2. Finding the Efficient Frontier using Monte Carlo Simulation

Monte Carlo Simulation involves mathematical methods that utilized to estimate the potential outcomes of uncertain events and evaluate their risk impacts in various real-world scenarios [7]. It models potential outcomes by utilizing probability distributions for variables with inherent uncertainty and recalculates results using different sets of random numbers within specified ranges. This computation is typically repeated thousands of times to generate a large number of possible outcomes. Due to its high precision, Monte Carlo Simulation is suitable for long-term predictions,

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and with an increase in the number of inputs, the number of predictions also increases, enabling higher accuracy in predicting results over longer timeframes.

In Monte Carlo simulations, the portfolio's expected return and variance are estimated using samples of returns generated across numerous simulations:

$$\mathrm{E}(R_p) \approx \frac{1}{N}\sum_{i=1}^{n} R_{p,i} \tag{3}$$

$$\sigma_p^2 \approx \frac{1}{N-1}\sum_{i=1}^{n}(R_{p,i}-E(R_p))^2 \tag{4}$$

$\mathrm{E}(R_p)$ denotes the expected portfolio return. $R_{p,i}$ denotes the return of portfolio in the i th simulation, σ_p^2 denotes the total risk of the portfolio and N denotes the number of simulations.

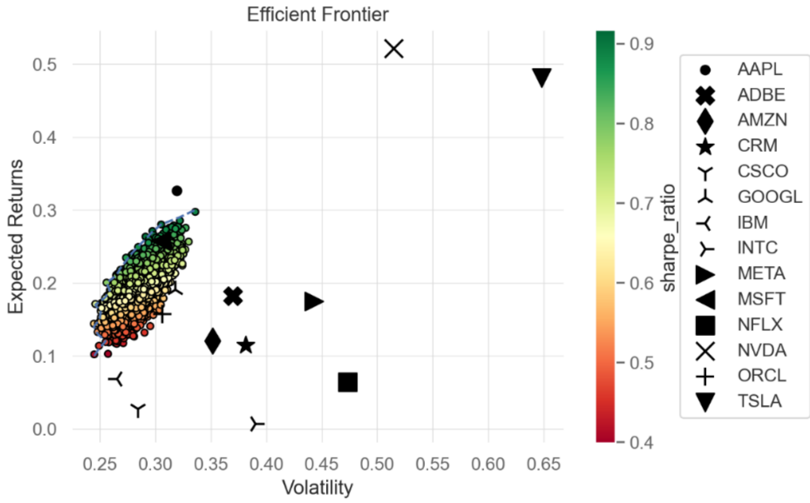

Figure 1: The efficient frontier driven through Monte Carlo Simulation.

Figure 1 displays the efficient frontier of a portfolio consisting of fourteen stocks, which is constructed through Monte Carlo Simulation. NVDA and TSLA exhibit higher expected returns, while IBM and CSCO have lower volatility.

2.3. Discovering Portfolio Performance that has Maximum Sharpe Ratio and Minimum Volatility.

Sharpe ratio refers to the ratio of the portfolio's risk premium to total risk. If the Sharpe ratio is higher, it implies that the portfolio has obtained greater returns though assuming less risk, which means investors have obtained higher returns per unit of risk taken [8]. This makes the Sharpe ratio an important metric for investors who want to maximize their returns in relation to the risks they are taking. By comparing the Sharpe ratios of different investments, investors can identify which portfolios are effectively generating superior risk-adjusted returns.

The following is the formula for Sharpe ratio:

$$S = \frac{R_p - R_f}{\sigma_p} \tag{5}$$

S signifies the Sharpe ratio, σ_p signifies the portfolio volatility, R_p signifies the portfolio return and R_f signifies the risk-free rate.

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The Efficient Frontier theory defines volatility as standard deviation, which is the difference between returns and their average, often expressed in annualized form [9]. At a certain level of risk, elevating the portfolio’s Sharpe ratio is an objective of the Efficient Frontier theory. To achieve portfolio optimization, investors can identify asset combinations in the portfolio with the highest risk-adjusted returns. This paper constructs graphs for portfolios of Maximizing Sharpe Ratio and Minimum Volatility using Python code, as shown in Figure 2.

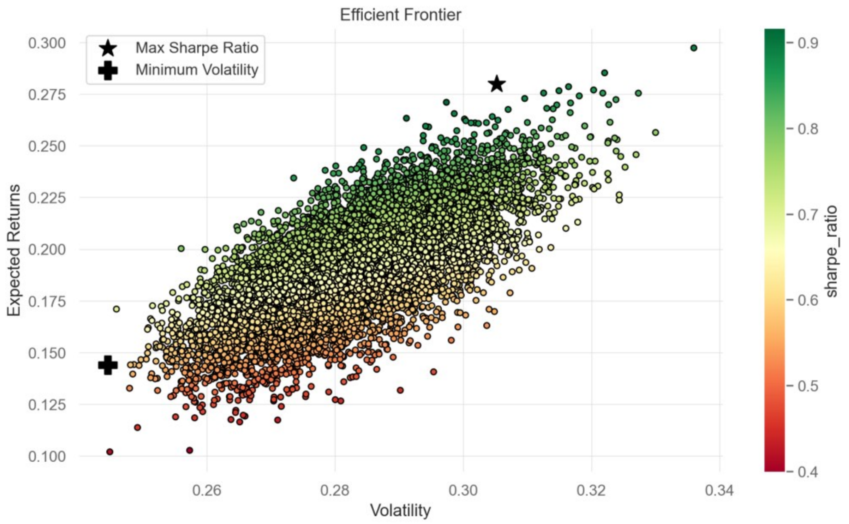

Figure 2: Minimum volatility and Maximum Sharpe Ratio

```
Maximum Sharpe Ratio portfolio
Performance
returns: 28.00% volatility: 30.52% sharpe_ratio: 91.73%
Weights
AAPL: 21.29% ADBE: 3.85% AMZN: 3.03% CRM: 2.39% CSCO: 1.83% GOOGL: 0.36% IBM: 3.95% INT
C: 4.75% META: 6.64% MSFT: 3.05% NFLX: 2.32% NVDA: 13.33% ORCL: 17.70% TSLA: 15.52%
----
Minimum Volatility portfolio
Performance
returns: 14.40% volatility: 24.46% sharpe_ratio: 58.86%
Weights
AAPL: 6.42% ADBE: 1.19% AMZN: 0.45% CRM: 2.36% CSCO: 16.82% GOOGL: 9.59% IBM: 16.86% IN
TC: 7.55% META: 5.44% MSFT: 8.84% NFLX: 7.67% NVDA: 1.84% ORCL: 11.19% TSLA: 3.77%
```

Figure 3: Information about the portfolios.

Figure 3 reveals that the Maximum Sharpe Ratio portfolio's return was 28.00% from January 1, 2019 to December 31, 2023, while that of Minimum Volatility portfolio was 14.40%. Maximum Sharpe Ratio portfolio is typically considered the choice for maximizing returns within an acceptable level of risk. It offers a disciplined approach to balancing high returns with acceptable risk levels, often leading to effective diversification. Therefore, the Maximum Sharpe Ratio of the portfolio consisting of these fourteen technology stocks is 91.73%, with a return of 28.00%. Conversely, to reduce portfolio risk, the Minimum Volatility portfolio is typically chosen by risk-averse investors. It provides more predictable performance, which can be comforting to investors during turbulent market conditions. Thus, the Minimum Volatility of the portfolio consisting of these fourteen technology stocks is 24.46%, with a return of 14.40%.

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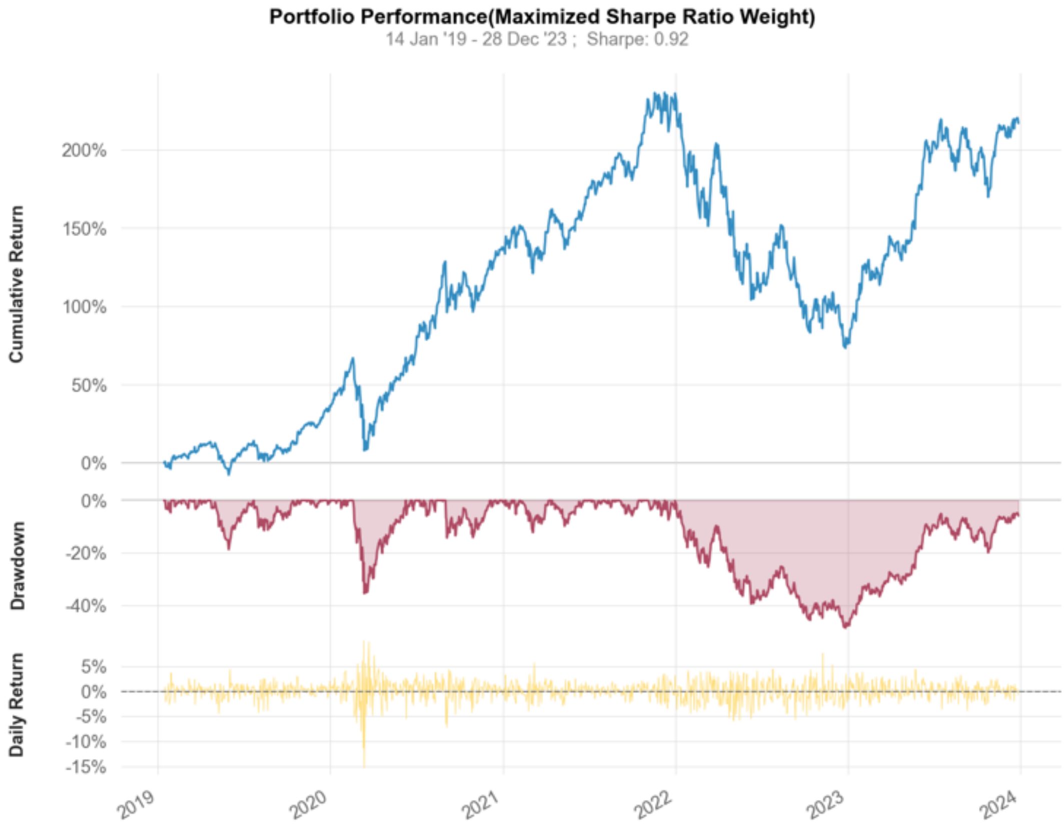

Figure 4: Portfolio performance (Maximum Sharpe Ratio Weight).

Table 1: Some indicators of the Maximum Sharpe Ratio portfolio performance.

Annual return	26.20%
Cumulative return	217.00%
Annual volatility	30.50%
Max drawdown	-48.50%

Figure 4 represents Maximum Sharpe Ratio portfolio's cumulative return, drawdown, and daily average return between January 1, 2019 and December 31, 2023. Table 1 shows some parameters of this portfolio.

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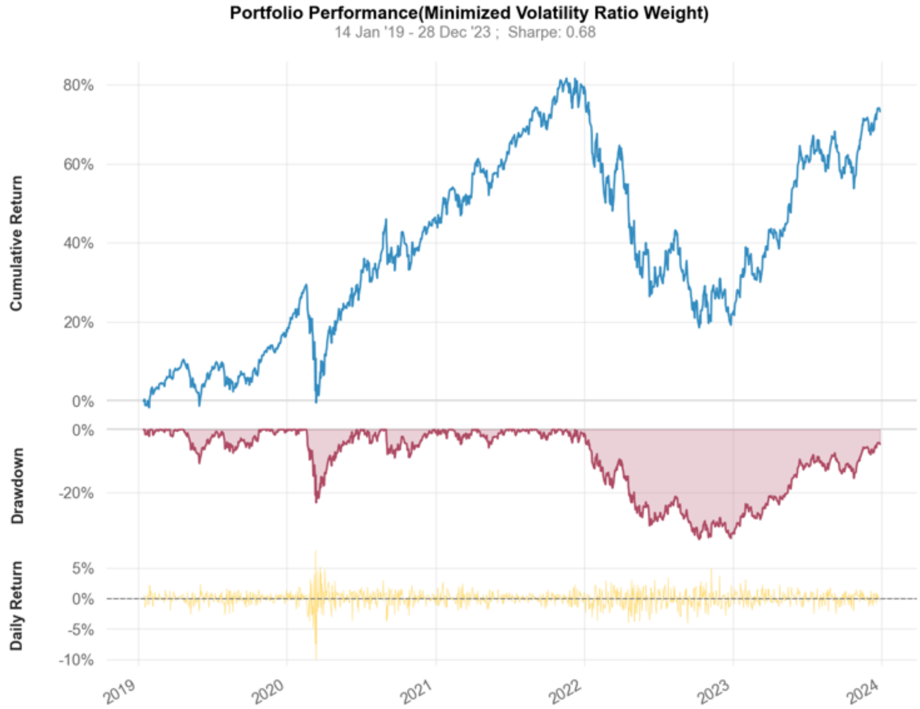

Figure 5: Portfolio performance (Minimum Volatility Weight).

Table 2: Some indicators of the Minimum volatility portfolio performance.

Annual return	11.70%
Cumulative return	73.20%
Annual volatility	19.10%
Max drawdown	-34.80%

Figure 5 represents Minimum Volatility portfolio's cumulative return, drawdown, and daily average return between January 1, 2019 and December 31, 2023. Table 2 shows some parameters of this portfolio.

Maximum Sharpe Ratio portfolio performed better than Minimum Volatility portfolio regarding annual and cumulative return, as determined by the comparison. However, Maximum Sharpe Ratio portfolio had a larger maximum drawdown than the Minimum Volatility portfolio due to its higher annual volatility. This indicates that the higher risks are associated with higher potential returns. By pursuing the optimal risk-return trade-off, the Maximum Sharpe Ratio portfolio is willing to compromise greater volatility and potential drawdowns for higher returns. Conversely, the Minimum Volatility portfolio offers greater security and stability, though this comes at the expense of diminished growth potential.

2.4. Analyzing Portfolio Allocation based on Risk Aversion Levels

Risk aversion is crucial as it determines how sensitive an investor is to changes in risk. Investors prioritize either stability or higher returns based on their financial objectives and individual comfort with uncertainty. Different investors have varying perceptions and tolerance levels towards risk, leading to different degrees of risk aversion. [10] Investors who are risk-averse typically prefer returns that are more certain, even if they may have a lower expected return, which primarily due to their inherent need for security and fear of potential losses. Conversely, the non-risk-averse investors are

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less impacted by potential negative outcomes and are more focused on the potential for significant gains.

Figure 6 shows the allocation of asset weights at different levels of risk aversion (represented by γ), indicating the portfolio compositions that aim to achieve maximum returns at specific levels of risk aversion.

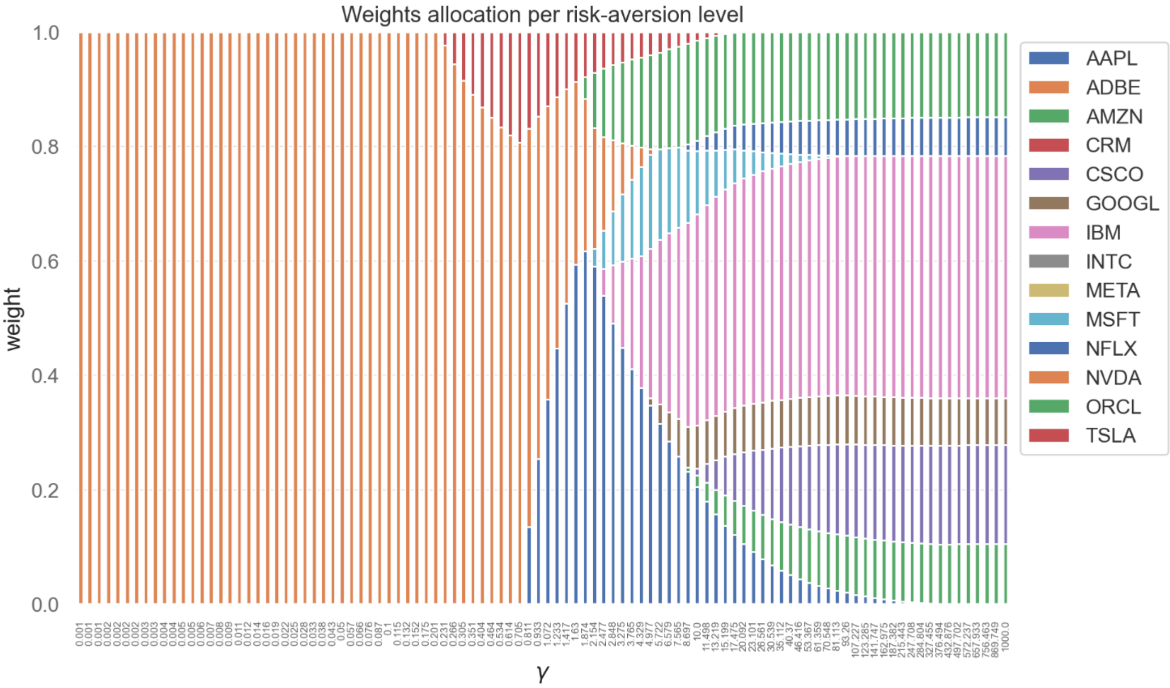

Figure 6: Weight allocation per risk-aversion level.

Through analysis of Figure 6, we can draw the following conclusions. When investors have a low level of risk aversion (γ values between 0.001 and 0.705), the portfolio has a higher allocation to NVDA because of its higher volatility and expected return, making it the optimal choice for lower levels of risk aversion. When investors have a high level of risk aversion (γ values between 107.227 and 1000), the portfolio has a significant allocation to IBM and CSCO because of their lower volatility and expected returns, indicating that these assets can effectively control the total portfolio risk. Considering COVID-19 pandemic, investors' risk preferences shifted notably in the short term, and their risk-averse behaviors had significantly increased [11]. Therefore, holding more positions of IBM and CSCO is a defensive, investment strategy which reduces exposure to high-volatility assets and increases diversification during periods of high risk-aversion.

3. Limitations

Due to various assumptions underlying the Efficient Frontier Theory, such as the consideration of risk-return trade-offs by investors in the process of deciding investment choices, The assumption of market efficiency and the positive correlation between risk and return may not be completely accurate in real markets, resulting in deviations from the results of this paper and actual circumstances. Additionally, the data period of this paper spans from January 1, 2019, to December 31, 2023, whereas the Efficient Frontier Theory typically requires data covering multiple market cycles to ensure representativeness. Therefore, four years of asset return data may not be sufficiently comprehensive. Furthermore, transaction costs, agency costs, and other frictions occur in actual markets are not factored into this paper, resulting in ideal rather than realistic outcomes.

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4. Conclusions

This paper collected the return data of fourteen US technology stocks from January 1, 2019, to December 31, 2023, and successfully derived the Efficient Frontier of the investment portfolio using Monte Carlo Simulation. Minimum Volatility and Maximum Sharpe Ratio portfolio allocations were determined by this paper, and it discovered that greater volatility and potential drawdowns come at the cost of the possibility of higher returns. In contract, the diminished growth potential is the expense of greater security and stability. Furthermore, the paper concluded the optimal portfolio allocation considering investors with different risk aversion, revealing that when investors have a lower risk aversion, the portfolio has a higher allocation of NVDA due to its higher volatility and expected return. Conversely, when investors have a higher risk aversion, IBM and CSCO have a larger allocation as their lower volatility effectively controls the overall portfolio risk. In the context of COVID-19 pandemic when investors' risk-averse behaviors had significantly increased. Holding more positions of IBM and CSCO is a defensive strategy which reduces exposure to high-volatility assets and increase diversification. However, due to the Efficient Frontier Theory being based on various assumptions and the existence of transaction costs in reality, the analysis in this paper still has limitations and uncertainties. In the future, analysts should use more precise models to analyze the data and attempt to quantify the uncertainty factors as much as possible.

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Economic Performance and Business Models in the Chinese Theatre Industry: A Comparison of Wuzhen Water Town and Huichang Theatre Village

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Abstract: The Chinese theatre industry, despite its rich cultural heritage, has been historically overshadowed by other entertainment forms and has faced challenges in adapting to modern market dynamics. This paper explores the economic performance and business models of the Chinese theatre industry through a comparative case analysis of two distinct tourist attractions, Wuzhen Water Town and Huichang Theatre Village. The research methodology includes a review of the industry's historical context, an examination of current economic trends, and the case study analysis of the two venues. The finding reveals that while the industry has shown growth and is gradually embracing commercialization, it still faces significant challenges, including economic sustainability, infrastructure development, and balancing authenticity with commercial interests. The case study highlights unique approaches each venue takes to address these challenges, with Wuzhen focusing on international festivals and Huichang Theatre Village aiming to be a year-round cultural hub. Both venues strive to innovate and adapt to modern audience preferences while preserving their historical and cultural significance. The Chinese theater industry is gradually emphasizing on market and commercialization, while it needs to find a balance between maintaining artistic and commercial success. By learning from the successful experiences of the West, the Chinese theater industry has the potential to achieve sustainable development and contribute economically and culturally.

Keywords: Chinese Theatre Industry, Commercialization, Cultural Heritage, Economic Sustainability, Innovation and Adaptation

1. Introduction

Broadway is an example of the absolute titan of industry theatre is in the US, acting as an international household name; however, when was the last time you've heard of the Chinese theatre industry? In the rapidly developing ecosystem that is modern entertainment, theatre is an often-overlooked form of leisure. Especially in China, where the industry is underdeveloped compared to that of other developed countries. Ever since the founding of the People's Republic of China, the government has gradually nationalized most private performance troops. Under the nationalized system, performers have grown used to a steady income from the state instead of living off performance earnings. Now, the government is calling for the Chinese theatre industry to become more market oriented and

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commercialized, pushing performers to think more about their earning potential and reception by audiences. Meanwhile, understanding audiences value and its determinants is key to developing and maintaining long-term relationships with them in the theatre industry [1]. Theatre, as a medium of entertainment, is significant in many ways to cultural preservation, Chinese theatre reflects China's rich history, traditions, and artistic heritage. In terms of economic impact, the industry generates revenue, provides employment, contributes to local economies and artistic innovation. It faces the difficulty of balancing commercial viability with artistic integrity, a challenge faced by theatres worldwide. Wuzhen Water Town and Huichang Theatre Village are both tourist attractions but with creative differences in their approach to theatre; Wuzhen focuses on periodic festivals with an international flair, while Huichang Theatre Village aims to be a permanent hub for theater throughout the year, preserving historical buildings and fostering local talent [1]. This paper aims to present the economic performance and variety of business models in the Chinese Theatre Industry through the comparison of the two.

2. Economic performance of the Chinese theatre industry

The Chinese theatre industry, while often overshadowed by other entertainment forms, has shown remarkable growth in recent years. Theatre has faced challenges in adapting to modern market dynamics. Over the past decade, the industry has experienced consistent expansion, driven by factors such as rising disposable income and urbanization. Major cities like Beijing and Shanghai serve as thriving theatre hubs. Ticket sales remain the primary revenue source for theatres, but additional sources of revenue such as merchandise and concessions also contribute significantly. Sponsorships, government grants, and private investments also play a role in sustaining the industry. This has led to mass complacency—to the performers, it doesn't matter if a performance is well-received by the audience, costs are covered by the state. Thus, many performances have been created to pander to the interests of the performers themselves, and sometimes performances would only commence for specific events and holidays, caring little for the financial performance of their production.

Now, the government is calling for the industry to become more market-oriented, encouraging commercialization, pushing performers to think more about their earning potential and reception by audiences. Commercial performing arts sector is able to improve efficiency by optimizing use of resources and production scale, particularly by the latter [2]. This situation can be described as the survival of the fittest, and high quality works are set to thrive in this environment. However, economic performance varies across regions, with urban centres benefiting from higher audience density and greater disposable income. In contrast, rural areas encounter challenges related to infrastructure, audience engagement, and talent retention. Commercialization is not all-powerful, as theatre also has the unique ability of educating and influencing people—the social effect of theatre must also be considered. To produce a successful work, a production not only needs to be commercially successful, but must also have a positive social impact so that the performance can receive the approval of the party and government, achieving the ideals of the party in terms of entertaining the masses. In summary, the Chinese theatre industry is gradually embracing commercialization while preserving its artistic heritage, aiming to strike a balance between tradition and financial viability.

3. Business models in the Chinese theatre industry

The old business model for the modern Chinese theater industry was for theater tropes to be managed and financially sustained by the state. The state provided performers with a steady paycheck regardless of profit or loss so the performers did not have to worry as much about the earning ability of their work and had more leeway to pursue their own interests. But since the reform and opening up era, the government have pushed theater troops to be more and more commercialized and self-

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sufficient. Under this new competitive market-driven environment, the Chinese theater industry was forced to become more aware of cost and income and the reception of the audiences. This situation pushed Chinese theater troops to adopt new innovations, making attempts to improve their commercialization prospects.

Multi-city tours have been a model many troops have adopted, where after producing a show, the group would tour multiple cities. This helps with spreading their name and generates more revenue: since local audiences in each city is limited, touring multiple cities will expand the production to a much larger pool of customers with little risk, increasing potential revenue. One problem with this model is that the costs for these tours are extremely high, with accommodation, travel, food and more; sometimes the revenue generated from them will still result in a net loss, ultimately making the entire process a waste of time and money.

Intimate live performances are a new type of theater that rose up realitively recently in urban centers. In the 2010s, scripted roleplaying became a popular group activity amongst young people in China's major cities. The popularity of this recreational activity inspired some in the theater industry and urban centers soon started offering a new type of theater performances. These performances were held in small, enclosed spaces for small audiences of around 60-120 people. The small venue sizes helped keep down costs and provided an intimate atmosphere. The stages for these performances are often purposely built to be close to the audience, and may extend into the audience seating area, so that the audience would surround the performers. Performer would often walk into the audience and interact with them directly. These performances offered viewers a chance to experience an actor delivering a professional performance up close, helping draw them into the story. This satisfied the demand of young white-collar workers who crave authenticity and artistic entertainment.

The Chinese theater industry have learned to chase current topics of interest in the market. The industry is aware of how hot topics will attract more consumers. For example, the play *Che Guevera* produced in 2000 successfully grasped audience's desire for revolutionary material, a gap in the market. They industry has also increasingly adopted the star power of lead actors, using their influence to draw in more fans. However, celebrities in the Chinese theatre industry are still relatively sparse, the industry need to develop and market these stars better in the future and groom new up-and-comers. In this area, there is much that the Chinese theater industry can still learn from the more developed theater industry of America.

The Chinese theatre industry is also adopting new technology. Streaming is an innovation forced upon the industry by the covid lockdowns. For example, the creation process of the modernized Peking Opera *Xun Yun Feng* was started soon after Chinese New Year in 2020, right at the beginning of the Covid 19 pandemic. Because of the lockdowns and travel restrictions, the writers, producers, directors and actors discussed and edited the script over conference calls. The performance was later streamed to a wide audience online and the ticket price was only 9.9 RMB, a tiny fraction compared to what live theater tickets normally cost. Streaming allowed theater productions to reach a large audience and also save on production costs. For live performances, theater tropes have adopted new displays and projection technology to make their sets and backgrounds look more interactive and realistic, helping to engage the viewers' interest [3].

4. Case study analysis deep dive on Wuzhen Water Town

Wuzhen Water Town boasts over 6,000 years of history, making it a testament to preservation and heritage conservation, a major strength in attracting tourists. The town's unique architecture, with houses made of black bricks and gray tiles contrasting sharply with white walls, resembles a Chinese ink wash drawing. These historical venues serve as authentic backdrops for traditional Chinese performances, including water puppetry, shadow plays, and local operas. As mentioned before, this will not only attract those interested in the plays themselves, but also those interested in the preserved

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ancient architecture, and those who are interested in experiencing both simultaneously. Additionally, the site has plenty of cultural tourism opportunities, attracting visitors from Hangzhou, Suzhou, and Shanghai. By staging year-round performances, Wuzhen can become a cultural destination for weekend getaways and sightseeing. Balancing authenticity while managing tourism remains crucial for its long-term success.

5. Case study analysis deep dive on Huichang Theatre Village

In terms of SWOT, Huichang Theatre Village stands out due to its unique concept, a distinct strength. Unlike any other theater setting in the world, it is a real village where the spirit of theatre can be felt in every corner. Founder Stan Lai's vision has transformed historical buildings, some dating back to the Ming Dynasty, into an authentic and culturally rich environment. The partnership between prestigious director Stan Lai and the local government ensures strong support and resources for this ambitious project. Compared to its competitors, the village itself is also adapted for international visitors, with signposts in the village and subtitles in shows in English. Huichang Theater Village also provides vocational education to train technical talents in this industry, which is considered to be the first in China. This fostering of technical talents can provide a great advantage to the continued development of Huichang Theater Village. Right now, the theatre industry is starved for such technical talents, whether a play can be put up nor not depends greatly on if the organizers can hire enough people with the technical expertise to build sets, operate the lighting and sound systems, make costumes and do other behind-the-scenes work. By nurturing such rare talents in house, Huichang Theater Village can sustain high-quality theatre production on site, this supply of technical talents can also help the village build connections with other performers and organizations who need them to produce a play, attracting them to Huichang Theater Village. However, the village faces challenges due to its weaknesses. Being a rural settlement, attracting a consistent audience might prove difficult. Additionally, plays are performed in the dialect of the local area, this local Huichang dialect is hard for non-locals to understand and could create a language barrier for out of town visitors who want to fully understand the performances. Yet, there are exciting opportunities. The Huichang Theatre Village can boost Huichang's culture and tourism industries. By staging performances throughout the year, it can become a cultural destination for weekend getaways and sightseeing for audiences of all ages. Still, there are threats to consider. Other established theater destinations may compete for tourists and performers. Ensuring sustainable operations and funding ongoing performances will be critical for the village's long-term success.

6. Challenges faced by Chinese theatre 'Villages'

Both villages suffer from their own unique challenges, they are also faced with disadvantages bearing down on the industry as a whole, ranging from economic sustainability to infrastructure and more.

Huichang Theatre Village has faced challenges in securing consistent funding. Situated in a remote area, it lacks the visibility and financial support that more accessible locations might enjoy. However, the local government has stepped in to establish a fund aimed at attracting artists from around the world to be based in the village long term [4]. The commitment to improving overall planning, quality, supporting facilities, services, and marketing is essential for the village's sustainability. By addressing these aspects, they hope to create a thriving artistic community that can sustain itself over time. Wuzhen Water Town has successfully capitalized on its historical charm and tourist appeal. However, its commercialism is evident, with relatively high entrance fees for visitors. Tickets range from 100RMB for the east section to 150RMB for both sections, and restaurants can be overpriced [5]. The challenge lies in balancing preservation efforts with the need for revenue. While the town's popularity

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ensures a steady flow of tourists, maintaining authenticity and avoiding excessive commercialization are ongoing concerns.

In terms of revenue fluctuations, Huichang Theatre Village benefits from its unique positioning. While it may not experience the same seasonal tourism peaks as more famous destinations, it offers a different kind of experience. Visitors come specifically for the theater, contributing to a steady stream of revenue. However, the challenge lies in maintaining this flow consistently throughout the year. The village’s revenue may be less susceptible to seasonal fluctuations compared to more tourist-driven locations. Instead of relying solely on peak seasons, it aims to attract theater enthusiasts year-round, creating a more stable income base. Wuzhen Water Town also experiences significant seasonal tourism. Its popularity peaks during holidays and weekends, leading to crowded streets and bustling markets. As water is a main attraction of the area, the town must pivot their strategies when winter arrives and the water becomes frozen and less desirable. The town draws visitors across all backgrounds, but this influx can be overwhelming at times. The revenue stream heavily depends on these seasonal fluctuations. During peak times, businesses thrive, but off-peak periods may pose challenges. Balancing preservation efforts with economic sustainability remains crucial.

Another challenge both businesses face is the infrastructure and development, with aging facilities and questionable accessibility. Huichang’s relative remoteness poses accessibility challenges. Visitors from outside Jiangxi Province typically need to reach Ganzhou city by plane or train and then take a two-hour car or bus ride to the village. The lack of direct flights and the nearest airport being a two-hour drive away may deter some travelers. Therefore, many might not consider opportunity cost worthy, limiting the village from tourists. Wuzhen, on the other hand, lacks a proper airport or train station for direct transport, but has tried to make up for this by having buses in the town itself for better accessibility. This still does not make up for the lack of direct transport, but Wuzhen does lie at the center of Shanghai, Hangzhou, and Suzhou, making areas around it easily accessible via expressways and highways, where tourists can then catch a bus or car to the town itself. In summary, both Huichang Theatre Village and Wuzhen Water Town face distinct accessibility challenges related to direct transportation.

As massive areas acting as tourist attractions, both theatre villages need to be wary of their environmental impact. While technological advancements improve efficiency and convenience, they also have environmental implications. The installation and maintenance of smart infrastructure require energy and resources. The influx of tourists and increased urbanization may strain local ecosystems, affecting water quality, waste management, and green spaces. Sustainable practices are essential to mitigate these impacts. Balancing modernization with environmental impact is crucial. Both businesses have strived to decrease their negative environmental impact as much as possible. Huichang Theatre Village encourages cashless payments and offers innovative travel experiences, such as intelligent facial recognition, self-guided audio tours, and smart parking systems. These initiatives enhance visitor convenience while minimizing environmental impact. Wuzhen also encourages these initiatives, and in 2009 it was even designated as the first PATA eco-tourism destination in Mainland China [6-10].

7. Conclusion

In conclusion, the research provides an in-depth analysis of the Chinese theatre industry, focusing on its economic performance, business models, and the unique strategies employed by Wuzhen Water Town and Huichang Theatre Village. The findings underscore the industry's transition from a state-supported system to a more market-oriented approach, highlighting the cultural and economic significance of theatre in China. The study also reveals the challenges and opportunities faced by these venues in their pursuit of commercial viability and cultural preservation.

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Meanwhile, the Chinese theatre industry is confronted with several key issues. Economic sustainability is a pressing concern, with the need to balance ticket sales, merchandise, and sponsorships against the costs of production. Meanwhile, infrastructure and accessibility present significant hurdles, particularly for rural venues like Huichang Theatre Village. Also, audience engagement is another challenge, with the industry needing to attract and retain talent while also catering to the tastes of a diverse and volatile modern audience. Additionally, there is a need to manage the environmental impact of tourism and urbanization, ensuring sustainable practices that do not compromise the integrity of the venues or their surroundings.

To address these challenges, there are several strategic suggestions. Firstly, the industry should continue to embrace commercialization while ensuring that the cultural and artistic integrity of performances is not compromised. This includes leveraging the star power of performers and aligning with current market trends to attract a broader audience. Secondly, there is a need to improve infrastructure and accessibility to make theatre venues more reachable for a wider audience. This could involve enhancing transportation links and facilities within the venues themselves. Thirdly, the industry should focus on diversification and innovation, exploring new forms of theatre and performance styles that can cater to different consumer preferences and price points. Lastly, sustainable practices should be adopted to mitigate the environmental impact of theatre tourism, balancing modernization efforts with the preservation of local ecosystems and cultural heritage.

The research significance of this paper lies in its multifaceted impact on the Chinese theatre industry and the broader business ecosystem. Here are several key areas where the paper's findings and analysis contribute significant business value:

Industry Development: The paper provides a comprehensive overview of the Chinese theatre industry's current state and potential for growth. By identifying trends, challenges, and opportunities, it offers a roadmap for the industry's evolution, helping stakeholders understand where to focus efforts for sustainable development. Strategic Planning for Companies: Companies within the theatre industry can leverage the insights from this paper to formulate strategic plans. Understanding the importance of commercialization, audience engagement, and environmental sustainability can guide companies in making informed decisions about production, marketing, and operational strategies.

Market Orientation: The push towards a market-oriented approach can help theatre companies become more competitive and responsive to audience preferences. Focusing on the market instead of the product puts the consumer’s needs first, which is especially important for an experience like watching theatre, as the product itself needs to retain the attention of customers continuously. This research can aid in identifying new market segments and tailoring performances to meet the demands of a diverse audience base.

Innovation and Adaptation: The paper encourages innovation within the industry by highlighting the need for diversification and adapting to modern trends. This can lead to the creation of new performance styles, business models, and technologies that can revitalize the industry and attract new audiences.

Cultural Preservation and Promotion: By emphasizing the importance of cultural heritage, the paper underscores the role of theatre in preserving and promoting Chinese culture. This can lead to a better understanding of theater’s cultural tourism value and economic impact. Economic Impact: The growth of the theatre industry can have a positive economic impact by generating revenue, creating jobs, and contributing to local economies. The paper's analysis can help in identifying areas for investment and development that can stimulate economic activity.

Environmental Sustainability: The paper's focus on environmental sustainability can guide theatre companies towards adopting eco-friendly practices. This not only benefits the environment but can also enhance a company's image and appeal to environmentally conscious consumers.

Government Policy and Support: The findings can inform government policies and initiatives aimed at supporting the arts and cultural sectors. By understanding the industry's needs and challenges, policymakers can develop targeted programs and incentives to foster growth and sustainability.

Education and Training: The paper can serve as a valuable resource for educational institutions and training programs in the performing arts. It can help shape curricula that prepare the next generation of theatre professionals for the realities of a market-oriented industry. Problem-Solving: The paper identifies specific challenges faced by the industry, such as economic sustainability, infrastructure, and audience engagement. By providing a detailed analysis of these issues, the paper offers a basis for developing targeted solutions and strategies to overcome them.

In summary, the research significance of this paper extends beyond academic interest to offer tangible business value. It provides actionable insights for industry development, strategic planning, innovation, cultural promotion, economic growth, environmental sustainability, policy formulation, education, and problem-solving, ultimately contributing to the vibrancy and sustainability of the Chinese theatre industry.

The primary limitation of this research is the reliance on secondary data sources and a limited comparison between only two cases, this may contain the depth of insights and the ability to generalize the results to the broader industry. Also, the paper does not provide extensive quantitative data or statistical analysis to support the findings, as well as the audience feedback, leading a lack of understanding from the perspective of the audience.

In further studies, more primary data should be adopted according to our own research. Meanwhile, more theater villages or practices in this industry should be included to provide a comprehensive overview for the Chinese theater industry. From another perspective, audience feedback should also be collected since they are the customers and symbolize future preference in this industry.

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Capital Structure, Industry Differentiation, and Firm Performance

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Abstract: This study examines the impact of capital structure on firm performance, highlighting industry-specific differences and the influence of economic and regulatory environments. Capital structure, particularly the debt-to-equity (D/E) ratio, plays a critical role in financial management, affecting both profitability and financial risk. The Modigliani-Miller theorem serves as a theoretical foundation, positing that in the absence of taxes, a firm's value is unaffected by its capital structure. However, real-world applications reveal significant variations due to tax considerations, market imperfections, and industry-specific factors. Developed countries, with mature financial markets and stable economic conditions, allow firms to optimize their capital structures using diverse financing instruments. In contrast, firms in developing countries face higher financial risks and rely more on internal and short-term financing due to economic instability, high interest rates, and underdeveloped financial markets. Industry characteristics further influence capital structure; capital-intensive industries often have higher D/E ratios due to the need for significant investment in technology and infrastructure. The study underscores the importance of tailoring capital structure strategies to specific market conditions and industry needs to enhance financial stability and performance. Policymakers and business leaders must navigate these complexities to foster sustainable growth and minimize financial risks.

Keywords: Capital Structure, Industry Differences, Debt-to-Equity Ratio, Financial Leverage

1. Introduction

Warren Buffett refrains from investing in organizations that suffer from excessive debt. Therefore, equity and debt are crucial. Excessive debt is hazardous during periods of corporate downturn. Success necessitates the preservation of a favorable equity balance. The corporation must preserve a favorable debt-to-equity ratio to guarantee long-term profitability and financial stability. The debt-to-equity ratio is frequently employed to evaluate the financial leverage of the company. To ascertain a company's financing, the debt-to-equity ratio compares the total debt to the total equity. The debt-to-equity ratio is also referred to as the financial leverage ratio and the increased debt-to-equity ratio.

Additionally, the tax shield effect generated by debt financing reduces a firm's overall financing costs, as interest charges are tax deductible. On the other hand, equity financing does not entail fixed interest payments, which is why the cost of equity is typically higher than that of debt.

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In terms of corporate risk, a high percentage of debt financing necessitates the company to pay a substantial quantity of interest. This results in an increased financial risk for the organization. The company is at a higher risk of insolvency because it will be required to pay interest, regardless of its growth. In the event of a company's insolvency, shareholders are the last group to receive compensation. Consequently, they resort to egotistical strategies to maximize their profits, including overinvesting and exploiting the strategy. From a corporate leverage perspective, leverage enhances the profitability of a company and increases the potential return on investment or operating activities, thereby increasing shareholder returns. Nevertheless, when the company's cash flow is insufficient to cover interest and principal payments, high leverage entails a greater financial risk, which can potentially increase at any given moment.

Optimal Debt-to-Equity Ratio determination has been a critical concern in corporate financial management. The pursuit of an optimal capital structure, akin to the pursuit of the "Golden Fleece," has captivated the attention of economists and financiers for decades, as Brusov, Filatova, and Orekhova contend [1]. By adjusting the debt-to-equity ratio, it is feasible to augment a company's market capitalization and, consequently, accomplish the primary objectives of corporate management.

2. Theoretical Background

Exploring the theoretical frameworks and concepts that underpin the analysis is essential for establishing a firm foundation for this study. This section will explore the established theories and models that are associated with capital structure.

Initially, the Modigliani-Miller theory establishes a fundamental foundation for comprehending the correlation between a company's capital structure and its overall value. Developed in the 1950s by Merton Miller and Franco Modigliani. The fundamental components of M&M theory can be reduced to two propositions. M&M Proposition 1 emphasizes that the market value of a company is not influenced by its capital structure, which is the ratio of debt to equity, in the absence of taxes. The total market value of a firm remains constant regardless of whether it is financed entirely by equity or a combination of debt and equity. Consequently, there is no optimal debt-to-equity ratio. and the shareholders' demand for return increases in a linear manner as the firm's leverage increases. When a company continues to increase its leverage, it increases its financial risk. Consequently, shareholders will demand a higher rate of return to compensate. M&M Proposition 2 was created to address real-world circumstances more effectively. It posits that a company can enhance its market value by increasing its debt financing in the presence of taxes, as the pre-tax deductibility of the interest on the debt creates a tax shield. A company's shareholders' required rate of return increases less than it would in the absence of taxes when debt is financed.

Nevertheless, the construction of any theory is influenced by certain assumptions, which also tend to impose restrictions on the theory. The M&M theory is founded on the principles of homogeneous expectation, homogeneous risk class, perpetual revenue flow, and perfect capital markets. These idealized assumptions frequently contradict actual circumstances. For instance, the traditional Modigliani-Miller theory presupposes that debt is risk-free, meaning that the interest rate on the debt is fixed and constant, and the firm will not default.

However, this presumption is not based on reality. In reality, debt is a hazardous investment, as the interest rates fluctuate to the firm's financial position and market conditions. Additionally, the risk of default is actual. According to Brusov, Filatova, and Orekhova, the weighted average cost of capital (WACC) consistently decreases as leverage increases or decreases in the Modigliani-Miller theory, which permits hazardous debt capital [1]. Breuer and Gürtler note that the M&M hypothesis ignores capital market shortcomings [2]. The authors attack the M&M assumptions for assuming the "same risk level," which is not always true [2]. Because people and companies borrow at different market

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interest rates. Despite M&M theory's theoretical achievements, these complaints show its limited practical applicability.

3. Capital Structure in Different Industries

Following the Modigliani-Miller theory, which underpins capital structure analysis, industry-specific details can greatly impact a company's D/E ratio. Understanding this complexity is necessary for a complete inquiry. Therefore, studying how sectors have changed their capital structures can reveal the factors that affect their debt/equity ratios.

3.1. Capital-Intensive Industries

Capital-intensive industries have the following characteristics: high financial risk, technological complexity, a long period of investment recovery, and high fixed costs. To sum up, capital becomes a strategically committed factor. It is necessary for an industry of scale that relies on vast-scale investments in the purchase of equipment, in maintenance, and primarily, in technological updates. These are fixed costs that can hardly be reduced over a short-term period, underlining, in this sense, the industry's commitment to long-term expenditures and investments. The need for investment is also underlined by the long payback periods, representative of capital-intensive operations, which last several years, in general, to consolidate on the market and depreciate the equipment. Capital-intensive industries, however, are exposed to a financial risk directly proportional to their innovation potential, concerning the sensitivity that technology presents in light of market and demand fluctuations.

3.1.1. Real Estate (China Real Estate Industry Crisis)

The financial management and regulatory enforcement of giant developers in China have been under pressure. This further shows that the industry has huge, fixed costs that have to be paid, considering that it pertains to meeting regulatory compliance, site acquisition, and construction. The government revamped its efforts to curb critical debt problems through the "three red lines" initiative, thus deepening the recession for developers who are already overleveraged by making it harder for them to find new financing. Companies like Evergrande have a liquidity crisis due to their huge debts and incapability to quickly discharge their properties [3]. A quick and volatile market and firm governmental regulations did not allow the long-term return from the sector to grow, reducing the level of profitability and cooling down new projects and sales. This crisis indicated that the financial stability of the real estate business depends on an appropriate proportion of operating cash flow and debt [4].

3.1.2. Manufacturing

Expensive apparatus, technology, and infrastructure are utilized in the manufacturing process. High fixed costs are prevalent in the industry due to the necessity for companies to invest in state-of-the-art technology and equipment to remain competitive. Financial difficulties arise as a result of extended payback periods and frequent enhancements. The production line and R&D expenditures of the automobile and electronics manufacturing industries necessitate substantial capital expenditures [5]. A decline in demand could result in the underutilization of capital assets and a decline in profitability, which also poses a significant financial risk for the industry. To ensure long-term stability and growth, manufacturing organizations must maintain a balance between leveraged debt and cash flow to finance these essential expenditures and mitigate excessive financial risk [6].

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3.1.3. Oil and Gas Companies

Filimonova, Komarova, and Chebotareva found various funding options for Russian oil and gas businesses [6]. Novatek uses over 80% of its funds for operations, whereas Rosneft uses over 70% of borrowed capital. The authors advise oil and gas companies to consider company size, return on equity, and worldwide markets when building their capital structures. The larger businesses, like Rosneft, borrow funds and supply a high percentage of their products to worldwide markets, along with government backing and a concentration on peripheral and Arctic extraction.

Equitable capital (approximately 70% of the capital structure) should be used if the largest companies have domestic fields and have not entered the shelf area or areas where extraction is difficult, have low returns, and focus on international market supply. Medium-sized enterprises prioritize international market supply, offshore operations, and return on equity. The continental shelf corporation with a high return should prioritize equity capital. Conversely, if the company exploits fields in several Russian areas and has a balanced supply structure on international and local markets, it should seek a more balanced capital structure when selecting financing sources.

3.1.4. Telecommunication Industry

Fauzi et al. found that the capital-intensive telecommunications business must choose between equity and bond financing [7]. Equity financing may increase shareholder equity but decrease shareholder ownership, they say. Bond financing, while providing a steady source of money, may increase the firm's financial leverage ratio and debt servicing risk. Thus, while choosing a capital structure, a firm must carefully weigh the pros and cons of these two financing techniques to make the best choice for its financial status, stage of development, and market conditions. In their study, Fauzi et al. found a link between capital structure and firm performance [7]. The study found a negative link between capital structure and company performance in Nigeria, Vietnam, Romania, India, Malaysia, and Jordan. However, research in East Africa and Germany showed a favourable association. The capital-intensive and leveraged telecommunications industry highlights the importance of capital structure. This matches Getzman et al. and Dorselaer and Breazeale [3, 8]. Thus, capital structure's impact on business performance must be considered in D/E ratio analysis to better understand and manage capital-intensive industries' finances.

3.2. Labor-Intensive Industries

Labor-intensive companies need a large workforce to produce or provide services. They use less equipment and automation technologies than capital-intensive sectors, resulting in lesser automation. The concentration is on human resources, and starting and maintaining operations requires little cash. These companies have low fixed costs but high variable costs, especially labor expenses, which rise with production. In recent years, hospitality firms have been transitioning to a business model that is more expense-driven, which is referred to as an asset-light and expense-oriented strategy (ALFO) in Li, Yuan, and Manisha's study [9]. This strategy has become increasingly prevalent. The capital structure decisions of a company are significantly influenced by debt and equity financing. Despite the potential to increase firm profitability and reduce the cost of capital through the interest tax shield, research has demonstrated that excessive debt financing has also resulted in the bankruptcy of numerous hospitality industry firms [10].

Additionally, researchers have investigated the significance of capital structure decisions in the hospitality sector. Although the short-term and long-term debt behavior of hospitality and manufacturing firms is influenced by traditional leverage determinants, Tang and Jang found that certain determinants (e.g., earnings volatility and firm size) only affect the long-term debt use of software firms, but not of lodging industry firms [11]. According to trade-off and agency cost theories,

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debt is a crucial portion of a firm's capital and is expected to improve performance, especially for highly profitable enterprises, as She, Rui, and Guo found [12]. However, excessive leverage may hurt firms. The theory of preferred financing holds that debt is not the best capital financing option for companies with large retained earnings. This may indicate a negative relationship between capital structure and firm performance [5].

In labor-intensive retail enterprises, these theories are important. Retail enterprises, which rely on many people, use non-physical storefronts, outsourced warehousing and shipping, and electronic payment methods [4]. The capital structure selection procedure is crucial for retail companies. E-commerce businesses like Amazon can use moderate debt funding to expand and invest in technology due to their large market share and efficient operations. However, if the organization relies too much on debt funding, market volatility or economic uncertainty may threaten its financial stability. Thus, to ensure long-term continuous growth, a retail firm should examine its profitability, market position, and operational risks when choosing a debt-to-equity financing ratio.

4. Capital Structure in Different Markets

These differences in capital structure arise from differences in the regulatory environments, economic stability, and financial markets across developed countries.

4.1. Developed Countries

Developed countries' corporations have better access to the capital market and will make the best use of both debt and equity financing. The financial instruments and institutions in these countries become so developed that companies can optimize their capital structure. US and German corporations may issue bonds, equities, or sophisticated financial derivatives. It is more appealing for enterprises to enter the capital market in these countries, which is more stable and predictable compared to developing countries, so debt financing is also considered relatively safe [1]. The United States corporations can, at the same time, custom-make their financing strategy, with diverse financial instruments - from corporate bonds, convertible securities, to derivatives, and the very efficient stock markets. Corporate America can access large pools of capital at low cost through the depth and liquidity of U.S. capital markets. This provides the right environment for enterprises to optimize debt and equity and to balance their capital structures to minimize capital costs and maximize shareholder return [1].

4.2. Developing Countries

However, some constraints influence capital structure decisions for enterprises that are from developing countries. Such issues include economic and political turbulence, lack of long-term finance, increased interest rates, and less developed financial markets. Problems like these therefore make enterprises from developing countries rely more on internal financing or short-term loans. For example, the study by Fauzi et al. found that enterprises in Nigeria, Vietnam, and Malaysia lack a proper mechanism to access long-term finance; instead, they rely on short-term finances which increase the risks and instability of the business [7]. Corporations have difficulty in preparing long-term financial strategies due to regulatory and political instability [7]. The Nigerian financial market is very volatile and less liquid, and therefore, it is very hard for Nigerian firms to raise funds from long-term sources. The increased borrowing cost, because of increased interest rates, has left no other option than using equity financing or short-term loans, which are riskier.

Although the financial market is relatively young, Vietnam developed quickly due to economic reforms. Vietnamese organizations face difficulties in fulfilling capital market transactions because of high financial underdeveloped market conditions and strict regulations, and this further increases

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an organization's financial risk in significant difficulties in balancing capital structure [7]. The banking sector is, albeit, on the rise, yet underdeveloped compared to other developed economies; therefore, organizations are forced to rely on short-run, high-interest loans.

4.3. Comparison Among Developing Countries

Emerging nations also exhibit diverse capital structures. This variation is influenced by a variety of factors, including economic policies, market trends, and industry features.

Governmental constraints and financial market instability are encountered by Indian and Chinese enterprises. Large Chinese companies, particularly those engaged in manufacturing and real estate, have been able to accumulate substantial amounts of debt as a result of government assistance and substantial economic expansion. For example, the real estate sector in China has been permitted to borrow extensively due to economic development regulations. Nevertheless, this has resulted in a real estate crisis and increased financial risk [13].

To mitigate the risks associated with high interest rates and economic volatility, East African enterprises prioritize maintaining modest leverage ratios [14]. The capital structures of African enterprises are influenced by political instability and underdeveloped financial markets. Firms utilize internal funding and stock more frequently due to the high cost of external borrowing.

According to Fauzi et al., the telecommunications industry in impoverished countries encounters unique challenges. Massive investments in infrastructure are required by capital-intensive industries. Nevertheless, enterprises face a challenge in obtaining long-term funding at acceptable interest rates due to the absence of developed financial markets. Financial risk is elevated by an excessive dependence on short-term debt. The performance of the telecommunications industry in Nigeria and Vietnam is negatively correlated with its business capital structure as a result of financial constraints [15].

Enterprises in developed and developing countries possess distinct capital structures as a result of regulatory administrations, economic stability, and financial market access. Capital structure in developing countries relies very heavily on internal and short-term borrowings. In contrast, financing employed by developed countries is a complex structure in which several avenues are open for finance. Regional disparity plays a huge role in the capital structure of emerging countries.

5. Conclusion

Organizations, therefore, make such arduous and crucial decisions on the kind of ratios of debt to equity to adopt. The impact of the financial markets, economic stability, and level of regulation of a country determine to a large extent a business's capital structure. This is therefore the case for both developed and emerging countries.

Industrialized enterprises can, through a wide array of financing instruments and intricate financial institutions, work with both debt and equity so that costs are reduced and value is maximized for their shareholders by going for the optimal capital structure. Enterprises in developing countries are compelled due to economic uncertainty, higher rates of interest, and weak financial markets to rely on internal financing and short-term debt.

What is more, industry impacts the D/E ratios, whereby capital-intensive industries involve a high level of debt to subsume the high fixed costs, and on the other hand, the labor-intensive business requires equity. Capital structure has been impacted by a variety of factors as testified by case studies from the energy and gas industry of Russia and real estate, and the manufacturing industries of China.

Policymakers and business leaders must be capable of understanding such nuances and the peculiar challenges confronting organizations in other sectors and regions. Companies' capital structure

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policies should be market-condition specific, and this could potentially help improve financial stability, risks, and growth.

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Capital Structure and Risk Profile Comparison of Pharma Leaders

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Abstract: The pharmaceutical industry is in the spotlight nowadays. The financial situation of the pharmaceutical industry has experienced a lot of ups and downs due to the COVID-19. Therefore, analyzing the financial data of the pharmaceutical industry becomes significant. This report looks at three headline companies in the pharmaceuticals industry, Pfizer, Johnson & Johnson and Amgen. By analyzing and comparing their D/E ratio, weighted average cost of capital (WACC) and business risk, this report explores the reasons for the differences in the data of these three companies, forecasts the growth prospects of them and gives relevant advice to investors. The pharmaceutical industry is in the spotlight nowadays. The financial situation of the pharmaceutical industry has experienced a lot of ups and downs due to the COVID-19. Therefore, analyzing the financial data of the pharmaceutical industry becomes significant. This report looks at three headline companies in the pharmaceuticals industry, Pfizer, Johnson & Johnson and Amgen. By analyzing and comparing their D/E ratio, weighted average cost of capital (WACC) and business risk, this report explores the reasons for the differences in the data of these three companies, forecasts the growth prospects of them and gives relevant advice to investors. A basic result turn out to be that Investors should weigh the financial strategies of these companies against their individual risk tolerance and the dynamic landscape of the pharmaceutical industry before making investment decisions.

Keywords: Pharmaceutical Industry, Financial Valuation, Risk Assessment

1. Introduction

The research will be based on the analysis of the three enterprises' balance sheet data in pharmaceutical industry. The three companies all have salient features in different aspects, such as products, industrial chain, production places and so on. The following will be brief introduction of the three companies.

The first company Pfizer is a science-based, innovative, patient-first biopharmaceutical company [1]. The company's main focus is the manufacture of chemical compounds, and their first success was the development of an antiparasitic known as santonin. Afterwards, the company improved further with the industrial production of citric acid, which is extremely useful when it comes to industries and manufacture. The company continued to develop and grow, expanding the company's scope, exceeding an annual sale of $3 million by 1906. The main products includes cancer, vaccines, anti-infection, inflammation and immunity, rare diseases and other fields of prescription drugs and

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vaccines. Founded in 1886, Johnson & Johnson is one of the world's most comprehensive and diversified healthcare companies, with businesses in medical devices, pharmaceuticals and consumer products. Johnson & Johnson (JNJ) has been committed to introducing and producing high-quality innovative products to meet the growing needs of healthcare and provide a range of products for healthcare professionals, as well as doing research, manufacturing and selling pharmaceutical products and medical devices [2]. The enterprise has few operating companies which help it to conduct business. As one of the most prosperous companies in pharmaceutical industry, it provides medicine for cancer, neurological, infectious, cardiovascular, metabolic diseases and so on, as well as medical devises for caring and surgeries. The company's products have been spread to all corners of the world.

Amgen, founded in 1980, has total revenue of $26.3 billion in 2022. Primarily engaged in the exploration, research and development, production and marketing of innovative human medicines, dedicated to unlocking biological potential for the benefit of patients suffering from serious diseases [3]. By leveraging tools such as cutting-edge human genetics, Amgen seeks to uncover the complexity of disease and gain insight into the fundamental mechanisms of human biology. Amgen is devoted to making full use of the potential of biology for patients suffering from serious illness. To reach this goal, Amgen develops, manufactures, understand the fundamentals of human biology and deliver novel human therapeutics by referring to advanced human genetics.

Obviously, the three companies have many in common. However, they still have a lot of differences in way of managing the companies. The following will be analyzing the balance sheets of Pfizer, JNJ and Amgen, respectively. By comparing the significant differences between data, some valid results can be found.

2. Data Analysis

Table 1: Financial ratios of Pfizer, JNJ, and Amgen (FY2023).

Financial ratios	Pfizer	JNJ	Amgen
Market value of equity	162,548,345,646	377,285,417,755	154,205,902,111
Market value of debt	70,845,000,000	29,332,000,000	64,613,000,000
Leverage	0.31278	0.17506	0.66506
D/E ratio	1.53675	1.43636	14.58953
Marginal corporate tax rate	21%	21%	21%
Equity beta	0.56	0.53	0.58
Risk-free rate	4.5%	4.5%	4.5%
Market risk premium	5.70%	5.70%	5.70%
Expected cost of equity capital(r_E)	7.69%	7.52%	7.81%
Expected cost of debt capital	3.12%	2.63%	4.45%
Weighted average cost of capital(WACC)	7.90%	7.79%	6.57%
Business risk(β_A)	0.25293	0.24828	0.04630
All-equity expected return on assets(r_a)	5.94%	5.92%	4.76%

It can be noted that there are a few data items in Table 1 where the differences between these three companies are very significant, leverage, D/E ratio, WACC, business risk, expected return on assets and so on [4]. In this report, three of them are selected to be analyzed, D/E ratio, WACC, and business risk respectively. These metrics collectively inform on the firm's financial stability, investment risk, and cost efficiency. They are essential for investors and managers in making informed decisions about valuation, capital allocation, and comparative risk assessment.

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2.1. D/E Ratio

The data shows that the average debt-to-equity ratio of the U.S. pharmaceutical preparations industry in 2023 is 1.59. According to Table 1, the debt-to-equity ratio for Pfizer and Johnson & Johnson are around average. However, Amgen's debt-to-equity ratio is significantly above average, which is nearly 14.59. One of the reasons why Amgen has such a high debt-to-equity ratio is large-scale acquisitions. Amgen has made 26 acquisitions across sectors such as Biopharmaceuticals, Life Sciences-Us, Immunotherapy and others [5]. Such transactions can significantly increase debt. Another reason why Amgen is using so much debt is that it can handle its debt easily. Amgen's net debt is 1.8 times EBITDA, which suggests that debt is being used appropriately. Amgen's EBIT for the past 12 months was 9.1 times interest expense, which is also consistent with the above opinion.

2.2. Weighted Average Cost of Capital (WACC)

According to the data, the average WACC for the healthcare industry in 2023 is 9.20%. Table 1 shows that all the three companies are below average for this figure.

One of the reasons for the low WACC of these three companies is that, they have access to cheaper debt, possibly due to stronger credit ratings, established relationships with financial institutions, or favorable market conditions at the time of borrowing, which lead to a lower cost of debt. Also, they have a low cost of equity. This could be due to lower perceived risk by investors, because they have stable earnings, strong governance, and dominant market position. However, the interesting thing is that Amgen has the lowest WACC of the three companies, despite having a much higher D/E ratio and cost of debt. This is somewhat counterintuitive, as one would expect that higher leverage and cost of debt would lead to a higher WACC.

One of the reasons for this phenomenon is the tax shield effect of debt [6]. Amgen has an extremely high D/E ratio, which means that it is leveraging debt financing significantly. The interest payments on debt are tax-deductible, which provides a tax shield and effectively reduces the company's taxable income, leading to lower net cost of debt. This tax benefit can play a crucial role in reducing the overall WACC, even if the nominal cost of debt is high.

In addition, Amgen has been developing new medicine and trying to enter new markets. According to the report, Amgen expects to deliver substantial financial results by serving more patients around the world with its existing portfolio of marketed medicines, as well as numerous new medicines in development. It plans to payout approximately 60% of Non-GAAP net income on average to shareholders through 2030. These prospects are viewed favorably by investors, so the company might enjoy a lower cost of equity due to anticipated future cash flows, thus reducing its WACC [7].

2.3. Business Risk (β_A)

According to the data, the average unlevered beta for pharmaceutical industry is 0.92. In 2023, both Pfizer and Johnson & Johnson have a business risk of around 0.25, while Amgen has a business risk of only 0.04630. All the three companies have business risks well below the industry average.

Pfizer has a diversified portfolio of medicine and vaccines, including blockbusters and treatments for a wide range of conditions. This diversification across therapeutic areas reduces the risk associated with reliance on a single product or market.

Pfizer's diversity is reflected in the types of medicine, but Johnson & Johnson's diversity is not only in medicine. J&J operates across three major sectors: pharmaceuticals, medical devices, and consumer health products. Similarly, this diversification across healthcare sectors reduces the company's reliance on any single product or market segment, spreading its risk.

What makes Amgen stand out in this data on business risk is its star medicine erythropoietin and filgrastim. According to a research by Jelkmann, erythropoietin can be used for the treatment of

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anemia caused by chronic renal failure and the treatment of anemia caused by HIV infection [8]. Previous studies have shown that filgrastim can be used for the treatment of anemia caused by chronic renal failure and the treatment of anemia caused by HIV infection [9]. HIV and cancer are always a hot topic no matter what time of year it is, and even more so, a challenge worth tackling. So there will always be a market for drugs targeting these two diseases, and there will always be a need for scientific breakthroughs.

What’s more, Amgen's buyers include a diverse range of healthcare providers, from large hospitals and clinic chains to specialty pharmacies worldwide. Government and managed care organizations are also stable buyers of Amgen, like the Veterans Health Administration in the U.S.. This diversification in its customer base reduces the risk of dependency on any single buyer or segment.

Last but not least, Amgen sells its products in over 100 countries, with a significant presence in the United States, Europe, Canada, and increasingly in emerging markets. This global reach allows Amgen to mitigate risks associated with any single market.

3. Strategic Forecast

3.1. Pfizer

Firstly, Pfizer’s D/E ratio near the industry average suggests a balanced use of debt and equity in its capital structure. This balance may afford the company flexibility in future financing decisions without excessively increasing financial risk. Secondly, with a WACC below the healthcare industry average, Pfizer has a competitive advantage in terms of lower financing costs, which may encourage investment in new projects or research and development without the pressure of high-cost capital. Thirdly, Pfizer's lower business risk compared to the industry average indicates stability. This stability can attract investors and allow for more predictable long-term planning and investment in operations, with less concern for volatile returns. Thus Pfizer is promising for consistent performance. Pfizer’s stock could be considered for those seeking stability and consistent returns, as the company's financial health appears robust. However, it's essential to monitor the pipeline of new drugs and market performance of its current portfolio. According to the Q3 2023 financial report, Pfizer achieved revenue of $13.23 billion, down 42% from $22.6 billion in the same period last year. The loss reached $2.382 billion, compared with a net profit of $8.6 billion a year earlier [10]. Paxlovid, which once brought Pfizer nearly $57 billion in revenue in 2022, is no longer in vogue, with revenue of only $202 million in the third quarter of this year, down 97% from a year earlier. This may also be one reason why Pfizer adjusted its 2024 revenue. Holding At present, Pfizer, whose performance has been beaten back to the "original form", is opening a new round of layoffs and further reducing costs. For example, in the past three months, the group has disbanded the 400-member Pneumococcal polysaccharide conjugate Vaccine (trade name: Pei Er 13, Prevenar13) team in China, will lay off 500 employees from its production base in Sanwich, Kent, UK, and plans to lay off 100 employees from its plant in Newbridge, Ireland. In 2024, Pfizer expects to have one approved program and launch four commercialized programs, which, if approved and recommended, will achieve the goal of launching 19 new drugs/indications in 18 months.

3.2. Johnson & Johnson

JNJ’s slightly below-average D/E ratio demonstrates a conservative approach to leverage, which can be an advantage if market conditions worsen, as the company may not be as heavily affected by debt servicing requirements. Additionally, JNJ’s lower WACC allows for strategic investments and acquisitions at a lower cost, supporting its diversification strategy across various healthcare sectors. The low business risk indicates that JNJ’s diversification strategy is effectively reducing its overall risk profile, enabling it to undertake operations in various markets with confidence. Thus JNJ’s stock

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may be a good hold for diversified risk profiles. Its spread across pharmaceuticals, medical devices, and consumer health might offer resilience against market volatility. Investors should, nonetheless, stay informed about any significant changes in operations or market trends. On April 16, Johnson & Johnson released its first-quarter report for 2024, with global sales reaching $21.4 billion, an increase of 2.3% over the same period last year. Among them, Johnson & Johnson Medical Technology sales of $7.8 billion, an increase of 4.5%. J&J expects full-year sales of $88.7 billion to $89.1 billion in 2024, up from its previous forecast of $88.2 billion to $89 billion. In August 2023, Johnson & Johnson announced the completion of the stock exchange offer to split Johnson & Johnson and Kenvue, and the consumer health business was fully operated independently. In September of the same year, Johnson & Johnson announced a brand refresh, integrating its two major medical technology and pharmaceutical businesses under the Johnson & Johnson name. From then on, Johnson & Johnson will focus on pharmaceutical and MedTech solutions. Looking at the medical device sector alone, Johnson & Johnson has made big moves in recent years. In October, Johnson & Johnson announced that Ashley McEvoy, global Executive Vice president of Johnson & Johnson and global Chairman of Johnson & Johnson Medical Technologies, will step down. Tim Schmid has been named the new Johnson & Johnson Global Executive Vice President, Global Chairman of Johnson & Johnson Medical Technologies, and joins the company's Executive Committee. On the business side, in addition to a number of large acquisitions, the company is also actively adjusting the internal sector. Among them, the orthopedic reorganization plan has attracted wide attention. The restructuring is expected to be completed by the end of 2025 at a cost of $700 million to $800 million. J&J is looking to move the company's orthopedic division out of "less profitable markets and product lines" through a two-year restructuring plan to improve the division's profitability.

In December, medical device provider Integra LifeSciences announced it would acquire Acclarent, a unit of Johnson & Johnson Medical Technologies, for $275 million upfront. The latter, previously part of Johnson & Johnson Ethicon, has a portfolio that includes balloon technology for sinus dilation and ear and throat dilation in children, as well as surgical navigation systems. J&J Chairman and CEO Joaquin Duato said earlier this year that going forward, J&J will continue to improve its pipelines and capabilities, shift its portfolio to faster-growing markets, and continue to deliver pipelines. By 2027, one-third of J&J MedTech's sales are expected to come from new products.

3.3. Amgen

Amgen’s significantly higher D/E ratio indicates aggressive leverage, which may increase financial risk. However, if managed well, this can also amplify returns on equity. Future operations may focus on optimizing the balance between leveraging for growth and maintaining financial health. Despite its high leverage, Amgen's WACC is the lowest of the three companies, possibly due to the tax shield from its debt. This low WACC can be beneficial for funding new projects and expansions at a lower cost. Moreover, Amgen’s low risk allows for aggressive investment strategies, with the expectation of stable returns. Its low WACC and business risk, coupled with its strategic market position, suggest a potentially strong performance. Investors holding Amgen stocks should be comfortable with the associated risks and keep an eye on the company’s ability to manage its debt and the success of its product pipeline. Before the US stock market on October 31, 2023, the well-known US pharmaceutical company Amgen (AMGN.US) announced the third quarter of 2023 results, data show that Amgen's total revenue of about 6.9 billion US dollars, better than the consensus analyst expectation of 6.88 billion US dollars, an increase of 4%; Non-GAAP earnings per share were $4.96, better than analysts' consensus estimate of $4.68 and compared with $4.70 a year ago. Analysts from Jefferies and Wells Fargo attributed the quarter's profit growth to lower expenses. Shares of the Thousand Oaks, Calif.-based pharmaceutical giant were up more than 3% before the New York market opened, but reversed course and were down more than 3% at press time. According to the

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financial data, Amgen's product sales in the third quarter were $6.548 billion, an increase of 5%. Sales of Prolia, an osteoporosis treatment, rose 14% to $986 million in the third quarter. Third-quarter sales of EVENITY, a new osteoporosis drug, rose 53 per cent from a year earlier to $307 million. Third-quarter sales of Aimovig, a migraine prevention drug, fell 12 per cent from a year earlier to $94m. Enbrel, a biologic DMARD drug used to treat rheumatoid arthritis (RA) and ankylosing spondylitis (AS), and one of Amgen's top-selling drugs, saw sales fall 6 percent year over year to $1.035 billion in the third quarter. Sales of the drug, used to boost white blood cell counts in patients, fell 50 per cent year-on-year to $124m in the third quarter. Under GAAP, Amgen's Q3 operating profit was approximately $2.0 billion, compared to $2.7 billion a year ago. On a Non-GAAP basis, Amgen's Q3 operating profit was $3.4 billion, compared to $3.3 billion a year ago.

4. Conclusion

In conclusion, the financial analysis of Pfizer, Johnson & Johnson, and Amgen reveals distinct strategies and outcomes shaped by their respective uses of leverage, cost of capital, and management of business risk. Pfizer's conservative financial approach and diversified portfolio positions it as a stable investment, suitable for investors prioritizing consistent returns and risk aversion. Johnson & Johnson's diversified healthcare offerings across various sectors, paired with its prudent financial leverage, suggest resilience and a promising hold for those seeking a balanced risk profile. Amgen's aggressive leverage strategy presents a higher risk yet also holds the potential for higher returns, appealing to investors who are comfortable with its current debt management and optimistic about its innovative product pipeline. Investors should weigh these companies' financial strategies against their individual risk tolerance and the dynamic landscape of the pharmaceutical industry before making investment decisions. Also, innovation is always the core and fundamental for pharmaceutical companies to maintain competitiveness. Then the dazzling "blockbuster" also has a patent expiration day, in the highly competitive pharmaceutical industry, only innovation can drive the product portfolio to move to the faster growing market, not afraid of the patent cliff. In addition, high sales also need to further expand overseas influence. With the continuous enhancement of innovation strength, China's contribution to the global pharmaceutical research and development field has gradually increased, many multinational pharmaceutical companies choose to locate their research and development centers in China, before the JPM conference in early 2024, the innovation achievements and potential value of Chinese pharmaceutical companies have been recognized by large foreign pharmaceutical companies. In addition, the Chinese market demand is huge, has become a lot of enterprises attributed to the growth of the Chinese market demand is strong, have increased the Chinese market, with frequent exchanges in the post-epidemic era, this effect will become increasingly apparent. What cannot be ignored is that following the trend is also one of the essentials of living.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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Harnessing the Power of Machine Learning to Superchange CAPM Forecasts

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Abstract: This paper investigates the improvement of the Capital Asset Pricing Model (CAPM) by incorporating machine learning techniques. The objective is to address the model's conventional constraints in accurately predicting stock returns. The conventional Capital Asset Pricing Model (CAPM), which heavily depends on the beta coefficient to explain returns, frequently proves inadequate in emerging markets and neglects to consider market irregularities such as size and value effects. Our methodology enhances the estimation of beta by refining the Capital Asset Pricing Model (CAPM) to exclude the intercept term and incorporating a dynamic rolling regression method. This approach captures the fluctuations of beta more effectively across different periods, resulting in a more precise estimation. This study utilises ten years of weekly closing price data from companies listed on the NSE Nifty 50 index. It employs rolling regression and two-stage regression analysis to improve the prediction of excess returns above the risk-free rate. The revised CAPM model, which omits the intercept, exhibits a superior level of accuracy, as evidenced by higher adjusted R-squared values and improved F-statistics. In addition, the paper analyses the Fama-French models within the Chinese stock market and explores the potential of advanced machine learning models, such as Long Short-Term Memory Recurrent Neural Networks (LSTM-RNN), to improve forecasting methods in unpredictable markets. Integrating LSTM-RNN models presents a promising approach to capturing intricate patterns in financial time series data, demonstrating substantial enhancement in forecasting accuracy compared to conventional methods such as OLS.

Keywords: Capital Asset Pricing Model (CAPM), Machine Learning, Rolling Regression, Asset Returns, Financial Forecasting

1. Introduction

Traditionally, the Capital Asset Pricing Model (CAPM) relies exclusively on beta as a means of explaining returns, disregarding other potentially influential factors. [1] The efficacy of the model fluctuates, frequently exhibiting inferior outcomes in markets that are less developed. In addition, the Capital Asset Pricing Model (CAPM) fails to account for market anomalies such as the size and value effects that are accounted for by other models. CAPM assumes a simplistic linear relationship between expected returns and beta, which may not always be accurate. Moreover, extensive research has disproven the sufficiency of beta as the sole factor accounting for returns.

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Nevertheless, a refined approach that integrates machine learning and CAPM can adequately address the initial limitations. The revised model improves upon the traditional CAPM by removing the intercept term in order to enhance the effectiveness of beta. The method utilises a dynamic rolling regression technique to effectively capture the variations in beta values across various time periods. Typically, the improved model calculates beta values for portfolios by excluding the intercept in the regression formula and considering only market risks. Subsequently, it evaluates the effectiveness of the betas in forecasting returns that surpass the risk-free rate, while maintaining the exclusion of the intercept to enhance clarity and accuracy. This enhanced model exhibited superior precision and suitability in comparison to the conventional CAPM. The simplification of the model permits the potential incorporation of supplementary variables that may offer a more comprehensive explanation of returns compared to beta alone.

A recent analysis examined a decade's worth of weekly closing price data (from April 2011 to March 2021) for companies listed on the NSE Nifty 50 index in Todaya Market. From a pool of 50 stocks, a total of 48 were selected based on the presence of comprehensive data for the entire ten-year period being analysed. [2] The Nifty 500 index served as a representative of the market, while the 91-Days Treasury Bill rate was chosen as the rate that carries no risk. The beta of the stocks was calculated using the data from the first two years. Subsequently, yearly data was used to create and analyse five portfolios. This paper incorporates machine learning into the original CAPM model by employing regression models such as rolling regression and two-stage regression analysis. The study utilised rolling regression as a key methodology, which involved dividing the dataset into overlapping segments of 3 years. These segments were then analysed sequentially, with each analysis advancing quarterly.

Another scholarly paper conducts a comprehensive study to assess the efficacy of the Fama-French asset pricing models in the specific context of the Chinese stock market. [3] This market is known for its distinct regulatory and economic conditions. The main objective is to compare the three-factor (FF3) and five-factor (FF5) models with the traditional Capital Asset Pricing Model (CAPM), using stock data from the Shanghai A-share market between 1994 and 2023.

The paper utilises data from January 1994 to December 2023, specifically excluding segments of the market such as the Growth Enterprise Market (GEM) and Key Economic Market (KEM). The study employs a 2x3 portfolio segmentation technique that considers factors such as market capitalization-to-book ratio, market capitalization-to-operating profitability, and market capitalization-to-investment level. This comprehensive segmentation facilitates accurate data analysis and verification.

In addition, the introduction of machine learning methods, specifically deep learning models like Long Short-Term Memory Recurrent Neural Networks (LSTM-RNN), has significantly transformed forecasting approaches. [4] These models offer improved predictive precision and better management of the intricate nature of financial time series data.

In the past, financial forecasting has been based on models that assume linear connections between returns and their predictors, such as the CAPM and later, the multi-factor models proposed by Fama and French. These models have played a crucial role in both academic and practical financial applications, but they often struggle to handle the complexities of real-world data. The adoption of more sophisticated models has been facilitated by recent advancements in computational power and machine learning. Research conducted by Roondiwala et al. (2017) has shown that LSTM-RNN models are highly effective in forecasting stock prices. [5] This indicates that these models have great potential for use in various financial applications.

Another researcher performs experiments to evaluate the effectiveness of a machine learning model. They utilise a dataset that consists of various variables from the Ho Chi Minh City Stock Exchange, spanning from January 2015 to June 2023. These variables include the VN-Index, yield

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on one-year bonds, and adjusted closing prices of the stock market. [6] The selection of this time period was based on its high level of volatility, which makes it an ideal test scenario for forecasting models. The analysis utilised two primary computational models: Ordinary Least Squares (OLS) and LSTM-RNN.

2. Methodology

2.1. Two-stage regression analysist

The Two-stage regression analysis involves conducting a time series regression to determine the beta (β) value, which quantifies the level of volatility or systematic risk in relation to the market. This serves as the initial stage of the analysis. In the second stage, cross-sectional regression is conducted to examine the correlation between the calculated beta and the excess returns of the portfolios, relative to the risk-free rate.

$$\text{Return of Security} = \alpha + \beta \times \text{Market Return} + \epsilon \tag{1}$$

$$\text{Excess Return} = \beta \times (\text{Market Return} - \text{Risk} - \text{Free Rate}) + \epsilon \tag{2}$$

The intercept in the regression model is denoted by alpha (α), while the beta (β) represents the sensitivity of the stock's returns to market returns. The error term is indicated by the symbol ϵ.

The constrained CAPM Model developed by Bajpai and Sharma (2015) omits the intercept term, which has been shown to provide a more accurate explanation of the fluctuations in stock returns compared to the conventional model. [1] This model enhances the conventional CAPM by removing the intercept term and proposing that the asset's returns are completely and exclusively accounted for by the market's excess returns above the risk-free rate, which are directly proportional to the asset's beta. The t-tests were used to assess the significance levels of the beta coefficients. The results indicated that the constrained model, which did not include the intercept, had a better fit.

By excluding the intercept, this model has the potential to offer a more precise estimation of the correlation between returns and beta, specifically in illustrating how fluctuations in market returns can directly impact asset returns. Furthermore, the constrained model typically demonstrates higher adjusted R-squared values, indicating that it provides a better explanation for the variation in stock returns compared to the traditional model with the intercept. [7] The results showed that this model had a superior fit in terms of F-statistics and the significance levels of beta across different sub-periods analysed using rolling regression techniques.

2.2. CAPM, FF3 and FF5 models

Regression models are constructed to examine the impact of market factors on stock returns. The predictive capabilities of each model, namely CAPM, FF3, and FF5, are evaluated using the same conditions. Ordinary Least Squares (OLS) regression is used to calculate model parameters, which gives a numerical measure of the influence of each factor on stock returns. Visual representations of regression coefficients and confidence intervals can effectively summarise the relationships between variables, providing clear insights into the significance of factors.

The study commences by employing descriptive statistics to offer a comprehensive overview of the characteristics of the data. For each factor, essential measurements such as the mean, standard deviation, and range are computed. An illustrative graph could depict the distribution of returns for each factor during the study period, emphasising periods of high volatility or stability. The efficacy of the models is further examined by conducting thorough regression analysis, which quantifies the

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impact of each factor on stock returns. Graphs depicting the time-series analysis of factor premiums can aid in visualising patterns and changes in the effects of factors over time.

In order to assess the resilience of the models, the study incorporates sub-period analyses that exclude significant market disruptions such as the 2008 financial crisis. [2] This approach guarantees that the models' performance remains consistent under varying market conditions. A line graph can be used to illustrate the consistency of model predictions over different sub-periods, emphasising any irregularities or consistent trends.

The results are structured to facilitate a direct comparison of the performance of the FF3 and FF5 models with the CAPM. This section would be enhanced by the inclusion of bar graphs that compare the R-squared values of each model. These graphs would visually illustrate the relative explanatory power of the models in relation to each other. The importance of the findings is examined by establishing a connection between the models' performance and the research questions and existing literature. An enhancement to the discussion could involve incorporating a scatter plot that demonstrates the correlation between model predictions and actual market returns, highlighting the areas where the models demonstrate success or failure.

The formula of FF3 model is:

$$E(R\_i) = R\_f + \beta\_mkt \times (R\_m - R\_f) + \beta\_SMB \times SMB + \beta\_HML \times HML \tag{3}$$

SMB, which stands for Small Minus Big, represents the size premium that measures the additional returns generated by small-cap stocks compared to large-cap stocks. HML, short for High Minus Low, refers to the value premium, which quantifies the additional returns generated by stocks with high book-to-market ratios compared to those with low book-to-market ratios.

The FF5 model further includes two additional factors to the three-factor model:

$$E(R\_i) = R\_f + \beta\_mkt \times (R\_m - R\_f) + \beta\_SMB \times SMB + \beta\_HML \times HML + \beta\_RMW \times RMW + \beta\_CMA \times CMA \tag{4}$$

RMW (Robust Minus Weak) represents the measure of the profitability premium. The CMA (Conservative Minus Aggressive) factor measures the investment premium, which represents the additional returns generated by companies that adopt a conservative investment strategy compared to those that pursue an aggressive investment approach.

2.3. OLS and LSTM-RNN models

OLS, or ordinary least squares, is a conventional statistical technique employed to estimate the unknown parameters in a linear regression model. The model aims to reduce the total of the squared discrepancies between the observed dependent variable in the dataset and the values predicted by the linear function. The OLS model is chosen as the baseline model in this paper due to its simplicity and wide application in statistical forecasting. The Ordinary Least Squares (OLS) estimator in matrix notation is formally expressed as:

$$\hat{\beta} = (X\^T \times X)^{-1} \times X\^T \times y \tag{5}$$

X denotes the matrix of input data, which consists of independent variables. Y represents the vector of outputs, which is the dependent variable. β^ refers to the estimated parameters.

Unlike ordinary least squares (OLS), long short-term memory recurrent neural network (LSTM-RNN) is specifically designed to identify patterns in sequential data. This makes it particularly well-suited for analysing time series data, where the data points are arranged in chronological order. The LSTM architecture incorporates feedback connections that enable it to process not only individual data points, as in the case of ordinary least squares (OLS), but also entire sequences of data. A

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fundamental LSTM unit consists of a cell, an input gate, an output gate, and a forget gate. The cell retains values for indefinite time periods, and the three gates control the movement of information into and out of the cell. LSTM networks excel at mitigating the issue of long-term dependency by utilising the forget gate, which enables the model to eliminate information that is no longer pertinent to the prediction task.

The LSTM-RNN is employed due to its ability to handle sequential data and address the issue of the vanishing gradient, which is prevalent in conventional RNNs. The models were set up to assess their effectiveness, using parameters determined by past performance and unique characteristics of each model. [3] The LSTM model's parameters consisted of the batch size, the number of layers, and the number of nodes per layer. These parameters were optimised through preliminary testing. The following is the formula for the LSTM model:

$$f_t = \sigma_g(W_f \times x_t + U_f \times h_{t\,\_\,1} + b_f) \tag{6}$$

$$i_t = \sigma_g(W_i \times x_t + U_i \times h_{t\,\_\,1} + b_i) \tag{7}$$

$$o_t = \sigma_g(Wo \times x_t + U_o \times h_{t\,\_\,1} + b_o) \tag{8}$$

$$c_{t'} = \sigma_c(Wc \times x_t + U_c \times h_{t\,\_\,1} + b_c) \tag{9}$$

$$c_t = f_t \times c_{t\,\_\,1} + i_t \times c_{t'} \tag{10}$$

$$h_t = o_t \times \sigma_c(c_t) \tag{11}$$

The activation formula for the first forget gate is as follows: ft represents the forget gate, σg denotes the sigmoid function, xt represents the weighted sum of the current input vector, ht−1 represents the previous hidden state, and b represents the bias term. The activation of the second input gate is determined by the input gate it. The activation of the third output gate is represented by the variable ot. The variable ct′ represents the cell state, ht represents the hidden state, σg is the sigmoid function, and σc is the hyperbolic tangent function.

Practically, the process of training an LSTM entails providing it with a substantial quantity of sequential data, from which it acquires the ability to anticipate the subsequent steps in the sequence. For the purpose of financial forecasting, this could involve conducting training using past stock prices in order to anticipate future prices. The LSTM's capacity to retain long-term patterns and discard irrelevant information (via the forget gate) makes it highly suitable for tasks that involve not only complex relationships but also dynamic changes over time. LSTMs offer a strong framework for tackling challenges in financial time series forecasting, outperforming models that do not possess these advanced mechanisms for handling sequential data by utilising these capabilities effectively.

Ultimately, the authors employ Root Mean Square Error (RMSE) as a metric to quantify the precision of the models. The term is mathematically defined as the square root of the mean of the squared errors, which represents the average difference between the estimated values and the actual values being estimated. RMSE is a reliable indicator of the model's ability to accurately predict the response variable. It is the most suitable criterion for assessing the model's fit when the primary objective is prediction. The mathematical expression for calculating the Root Mean Square Error (RMSE) is as follows:

$$\mathrm{RMSE} = \mathrm{sqrt}\,[(\Sigma(\mathrm{Pi} - \mathrm{Oi})^2)\,/\,n] \tag{12}$$

where Pi are the predicted values, Oi are the observed values, and n is the number of observations.

The Root Mean Square Error (RMSE) metric was employed to assess and contrast the precision of the OLS and LSTM-RNN models. This metric is especially valuable for quantifying the degree of error in predictions, offering a precise measure of the performance of the model. The LSTM-

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RNN model was designed with a deep network architecture to effectively capture the intricate patterns in the financial time series data. The model's performance was consistently assessed using the rolling window method to compare it with the OLS model. This method is crucial for adjusting to dynamic market conditions.

3. Results

3.1. Two-stage regression results

While both models utilised rolling regression, the constrained model's exclusion of the intercept facilitated a more precise examination of the extent to which beta alone could account for returns. Removing the intercept can simplify the model and enhance the clarity of the model's outputs, making it easier to determine the impact of market risk. Although the conventional Capital Asset Pricing Model (CAPM) offers a fundamental comprehension of asset pricing based on the assumption of market efficiency and rationality, it frequently proves inadequate in real-world scenarios, particularly in highly volatile or intricate market conditions. [8] The constrained CAPM model, in contrast, provides a more streamlined and potentially more accurate approach by exclusively considering market risk as the factor influencing asset returns. [9] This is especially valuable in empirical research, where simplicity and precision are highly valued.

To enhance practical applications, portfolio managers and individual investors can utilise the refined model to achieve more precise predictions of stock returns. This, in turn, can result in improved portfolio management and investment strategies. Moreover, the constrained model emphasises the evident correlation between stock returns and market risk, which can be advantageous for enhancing risk management and asset pricing. Nevertheless, this paper stimulates additional contemplation and areas for further investigation. To conduct additional model testing, it is possible to test the constrained CAPM model in various markets and conditions in order to generalise the findings or refine the model further. [10] In addition, future research could incorporate additional explanatory variables, such as size, value, and momentum, in conjunction with beta, to construct multi-factor models that have the potential to enhance the accuracy of stock return predictions. In addition, employing machine learning techniques to optimise the parameters and select variables could further improve the accuracy and flexibility of the asset pricing models.

3.2. CAPM, FF3 and FF5 models

The FF3 and FF5 models utilize the traditional CAPM model as a reference point to comprehend asset returns solely based on market risk. The Fama-French models, unlike the CAPM, include extra factors that consider different aspects of risk and return. These factors are used to measure the Size and Value Premiums (FF3 and FF5 models). Both models suggest that smaller companies and companies with high book-to-market ratios tend to perform better, resulting in premiums that are not accounted for by the CAPM. Additionally, the FF5 model incorporates factors related to profitability and investment premiums, aiming to explain variations in returns that are not captured by the FF3 model.

The results are compared with findings from prior studies to assess the performance of the models in relation to established theories and other empirical evidence. A comparative graph can illustrate the degree of similarity or divergence between the findings of this study and those of similar studies conducted in various markets.

The study concludes by providing a concise overview of the main discoveries, highlighting the exceptional performance of the FF3 model within the specific context of the Chinese market. The study acknowledges its limitations and proposes future research directions, such as investigating supplementary factors or conducting tests in other emerging markets.

3.3. OLS and LSTM-RNN models

The results demonstrate that the LSTM-RNN model outperforms the OLS model across different portfolios. In portfolio 7, the LSTM-RNN model achieved an RMSE of 1.849, while the OLS model had an RMSE of 2.355. This indicates that the LSTM-RNN model has a more accurate and dependable forecasting ability. The graphs clearly demonstrate the improved predictive ability of LSTM-RNN by comparing the RMSE values and portfolio performances over time. These visual aids are essential for comprehending the behaviour of the model across various market phases.

The paper concludes that the superior performance of LSTM-RNN compared to traditional models such as OLS can be attributed to its sophisticated architecture, which enables it to effectively learn and capture long-term dependencies in data. This is especially beneficial in financial markets, as historical data often serves as a reliable indicator of future patterns. The study affirms that LSTM-RNN models are not only appropriate but also surpass traditional forecasting methods in the realm of financial market predictions. Their capacity to adjust to data with non-linear patterns and sustain performance over time provides a notable advantage for fund managers and investors. Subsequent investigations should examine the amalgamation of LSTM-RNN with other machine learning methodologies and the incorporation of supplementary predictive factors to augment the precision of forecasting.

4. Conclusion

This essay has examined the constraints of the Capital Asset Pricing Model (CAPM) and illustrated how the incorporation of machine learning methods can improve its predictive precision. After conducting a thorough examination of three different approaches—Two-stage regression analysis, comparisons with the Fama-French three-factor and five-factor models, and the utilization of Ordinary Least Squares (OLS) and Long Short-Term Memory Recurrent Neural Networks (LSTM-RNN)—it is clear that the Capital Asset Pricing Model (CAPM) by itself does not offer the most precise forecasts.

The Two-stage regression analysis demonstrated a notable enhancement in the accuracy of predictions when machine learning algorithms were utilized in conjunction with the traditional CAPM. Comparatively, when analyzing the FF3 and FF5 models, it became evident that CAPM has limitations in capturing market anomalies, which were effectively addressed by machine learning models. Furthermore, the utilization of Ordinary Least Squares (OLS) and Long Short-Term Memory Recurrent Neural Network (LSTM-RNN) models emphasized the ability of machine learning to adjust to intricate market patterns and improve the forecasting accuracy of the Capital Asset Pricing Model (CAPM).

These findings emphasize that although the Capital Asset Pricing Model (CAPM) offers a fundamental understanding of asset pricing, it is not adequate by itself for making optimal forecasts. By incorporating machine learning techniques, the performance of the Capital Asset Pricing Model (CAPM) is greatly improved. This is achieved by effectively capturing non-linear relationships and being able to adapt to dynamic market conditions. By integrating machine learning with CAPM, we not only address the inherent limitations of CAPM but also enhance its predictive capabilities, resulting in a more robust and dependable tool for financial forecasting. This integrated approach ultimately offers investors and analysts a more robust framework for making well-informed decisions in an increasingly intricate and ever-changing financial landscape.

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Analysis of the Advantages and Disadvantages of Commercializing Sports Leagues Based on NBA Alliance

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Abstract: Through the analysis of the advantages and disadvantages of commercialization in the NBA league, the conclusion drawn in this article is that the increase in the degree of commercialization ion of the league has a significant impact on the league's visibility, commercial value, economic income, and overall competitive level. It can also drive the development of the entire sports industry and the formation of a country's sports culture. In the process of commercialization, corresponding problems also arise. From the perspective of fairness, certain matches in the league may be affected by commercial interests in the terms of the fairness of referee calls and penalties. Sometimes, concessions may be made for the sake of the viewing and smoothness of the game, which can damage the interests of one team and violate the spirit of fairness and justice in sports. In addition, gray industries such as gambling and soccer are constantly emerging, which have a great impact and harm on society and are difficult to completely avoid. After decades of development, the NBA has successfully captured the development dividends of the media and Internet era, completed its own brand building, and pushed the NBA to the world. The NBA continuously improves its internal rules, introduces a series of policies, works closely with sponsors in various fields, and make it the world's number one professional basketball league. In order for China's professional basketball league to develop and grow on the path of professionalization and commercialization, in addition to learning and drawing on the NBA business model, it is also necessary to combine its own basic national conditions and basketball development status, formulate basketball league and culture with Chinese characteristics.

Keywords: Professional league, Commercialization of NBA, Basketball culture, Brand building

1. Introduction

Since the merger of NBL and BBA in 1966, the NBA has complied with the development trend of the times, In addition to the continues improvement of internal rules and the creation of basketball stars, people have made full use of the development opportunities of the Inter era and economic globalization to create their media and actively cooperate with TV media, online media. The NBA league also collaborates with sponsors from various fields to carry out NBA related activities and games around the world, The synchronous construction of NBA brands online and offline has greatly increased the NBA's visibility and attention globally, attracting a large number of fans and expanding overseas markets.

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To this day, the NBA has become the highest-level professional basketball league in the world and also the most commercialized basketball league. The NBA's brand building,business operation model, and strategy have become the object and benchmark for professional basketball leagues around the world to emulate.

After more than 70 years of development, the increase in commercialization of the NBA league has a huge impact on the league level. While improving the league's competitive level, it can also generate huge economic benefits. The article explores the experience and methods of the NBA in brand building and promotion, event sponsorship, profit methods, management system, and commercial operation through the study of the commercial mechanism of the NBA league. The advantages and disadvantages are also explored. The successful experience of the NBA league in the process of professional and commercialization is borrowed and absorbed, and combined with China's basic national conditions and the current development status of professional basketball league,theoretical references and references are provided for the commercial development path of Chinese basketball professional leagues and how to improve the league level, promoting the development of China's basketball industry.

The article mainly uses literature analysis to search for literature related to the commercialization of the NBA, mainly exploring how the commercialization process of the NBA leagues has developed, what aspects it includes, and the relationship between the competitive level and commercialization level of the NBA league. It analyzes and identifies the advantages and disadvantages of commercialization in sports professional leagues.

The main content of this article starts with the introduction and improvement of rules within the NBA management team. Secondly, the NBA's methods and measures in brand building and promotion.

2. The Construction and Promotion of NBA Brand

On November 7, 1896, the Trenton basketball team from New Jersey defeated the visiting Brooklyn YMCA basketball team. This game became the first professional match recorded in historical records. In 1898, the establishment of the American League became a landmark event in professional basketball in the United States. The American Basketball League (ABL) was established in 1925.The establishment of ABL is a true national league in the United States and has significant implications for the development of professional basketball in the country. The Midwest Basketball League was established in 1935.In 1937, it was renamed as the National Basketball League (NBL). The operation of NBL was the most successful in the early American league, laying the foundation for the establishment of the NBA [1]. The early professional basketball league in the United States had a small and unstable number of teams, a small league size, and distinct local and regional characteristics in the cities where each team was located. The first basketball league in the United States, NBL, had a total of six teams, known as the National League. In fact, the teams were all located near Philadelphia and were announced to be dissolved five years later. Afterwards, the Eastern and Central leagues were established, and the distribution of teams in these leagues was very concentrated [2].

Since the establishment of the NBA in 1946, the completion of each stage's goals has laid the foundation for the next stage's plans. From 1946 to 1984, the NBA focused on building local brands and merged with another basketball association in the United States, ABA, to expand the league's team size from ten to 22. It also changed the distribution of teams in the previous league, breaking through regional and local limitations. While expanding the size of the league, the introduction of black athletes into the NBA fully utilizes the athletic ability and performance talent of black athletes, which not only enhances the league level, but also increases the confrontational, ornamental, and attractive nature of the game. In terms of competition rules, multiple modifications have also been made, such as the introduction of the three-point rule and the 24 second attack rule. While ensuring

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fairness in the game, this has made the scoring methods more diverse and the game rhythm smoother [3]. At the same time, television broadcasting technology has greatly developed, and with the popularization of television and radio in the United States, the NBA also seized the opportunity of this period and collaborated with multiple television stations and broadcasting companies, earning considerable broadcast fees. Live streaming of NBA games not only expanded the influence of the league, but also produced many well-known star players to attract a large number of fans, increase topics and traffic. At this stage, the NBA completed local brand building, and the media still plays an important role in promoting the NBA to this day.

Since 1984, the brilliant achievements of the NBA are inseparable from David Stern's reforms. He became the NBA President in 1984 and began implementing a global promotion strategy after taking office. He started from the inside, improved the internal rules, created a series of systems such as free player system, salary cap, labor agreement and the first anti-drug system in professional sports, created NBA entertainment company and asset company, and introduced NBA as a commodity to the world through the Internet and satellite. NBA launched the star-making program, which has a deep foundation for the cultivation of basketball stars. George McKen is the first superstar in NBA history, and his outstanding performance on the court and influence in the basketball industry have led the rise and development of the NBA. But the stars will eventually age, and the emergence of new kings from generation to generation is the eternal theme of the NBA. Magic Johnson, Big Bird Larry Bird, and others have been renowned around the world, and the emergence of basketball god Michael Jordan has pushed the NBA's popularity to its peak, fully unleashing the "star effect" and attracting a large number of sponsors and media attention. In addition to the development of domestic American football stars, the NBA draft has also increased the addition of international players and the development of international stars, such as Nowitzki and Yao Ming, in order to expand overseas markets. Organize and carry out various marketing activities around the world, such as NBA care events NBA training camps, overseas performance games, and so on have become a reality. Finally, the cooperation between the NBA and television stations is also continuing, and Stern's strategy of promoting the NBA to the world is being realized from multiple perspectives [4].

3. The Profit Model of the NBA League and Teams

Through research on the development process of the NBA, the NBA's profit model can be roughly divided into ticket revenue, television broadcasting rights, sponsorship and advertising, as well as authorized product franchising and new member franchise fees. The ticket system of the NBA league can be traced back to the basketball league before the merger, which had already formed a commercial operation for fans to purchase tickets and watch games in the early stages [5]. Nowadays, the NBA has developed into a big team with 30 teams, and the NBA's ticket market has advantages such as more game venues, more stadium seats, including many VIP seats and luxury private rooms, and a large fan base covered by ticket prices from low to high. The added value of food and beverage products during the game can also expand profits. During each season, teams from different regions compete with each other, and there are some intense battles scheduled during American holidays, such as Christmas Day, the NBA will take the opportunity to expand its traffic and promote it, creating highlights to enhance the atmosphere of the game. At this time, tickets are often more expensive than usual, and prices will rise accordingly.

NBA television broadcasting has been going on since the 1950s, the first television broadcasting contract of the NBA was signed with Dumont Television Broadcasting Company, which pioneered the global promotion and television broadcasting revenue of the NBA later on. After the 1980s, with the rapid development of media and the emergence of NBA star making programs, world superstars like Jordan emerged, the NBA has entered a golden period of development. From newspapers and magazines to television broadcasting, and now to video live streaming and online short videos, The

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NBA has gradually gained a huge fan base and market, and its commercial value is even greater than before. More companies have partnered with the NBA to obtain broadcasting rights, such as ESPN, Tencent from China, Migu [6].

The cooperation between the NBA and sponsors can be said to be a perfect win-win situation, and for the NBA, the first and foremost issue is to solve the funding problem. There are many types of sponsors cooperating with the NBA, distributed in different fields. Sports brand giants Adidas and Nike have both signed jersey sponsorship contracts with the NBA. In addition to cooperating with the NBA league, each brand can also sign contracts with stars to promote products and gain profits by endorsing their popularity and influence. In the blank space of the jersey, each team can collaborate independently with other sponsors, print their own sponsor's logo on the jersey, and conduct advertising and marketing, in order for the team to receive sponsorship fees. The NBA usually has two forms of regional and global partnerships, with the vast majority being Fortune 500 companies such as Nike, Adidas, Reebok (acquired by Adidas), Coca Cola, Budweiser, Toyota, FedEx, Southwest Airlines T-Mobil and other world-renowned enterprises, as well as Chinese companies such as Mengniu, Harbin Beer, Lenovo, Tsinghua Tongfang, Haier, Li Ning, Peak, Hongxing Erke, China Mobile, and Hongnai Wood Industry.

The franchise of NBA products is also one of the major sources of revenue, the NBA itself does not participate in product design and development, but rather sells its team's logo, mascot, and other intellectual property rights to manufacturers in different industries. After manufacturers complete product production, they can sell them in their original sales channels or NBA stores. There are many types of NBA products, in addition to common products such as jerseys basketball, casual wear, and commemorative clothing, there are also daily necessities such as water bottles, pens, umbrellas, forming a product system. The emergence of NBA authorized products not only increases the NBA's profitability, but also indirectly integrates into the public's life, expanding the NBA's influence [7].

The NBA has evolved from a small league to a major league with 30 teams, and the scale of professionalization and commercialization has been expanding. However, in order to avoid malicious competition and more teams sharing market share, the NBA has strict restrictions on the increase of team numbers, and paying franchise fees is one of them. As early as the first year of the NBA's establishment, the league required 13 teams at that time to pay a fee of $10000 to cover league expenses and CEO salaries. In 1974, the New Orleans Jazz paid a franchise fee of $6.15 million. In 1979, the Dallas Mavericks paid a franchise fee of $12 million, becoming the 23rd team in the league. In the following thirty years, seven teams joined the NBA, each paying a huge franchise fee [8]. Nowadays, the NBA has a stable team size of 30 teams, distributed in different cities and regions, competing with each other in a healthy manner, with a quantity that matches market share.

4. The Advantages and Disadvantages of Commercialization of Professional Sports Leagues

All highly commercialized professional sports leagues in the world have the characteristics of a complete professional organizational structure, reasonable management, efficient operation, high global recognition, high level of league competition, and the ability to create huge economic value, such as the well-known English Premier League, Bundesliga, NBA, etc [9]. Taking the NBA as an example, in the early days, the number of NBA teams was small, the league size was small, the influence and reputation were low, and there was no formulation and improvement of policies and regulations that would help the development of the league, resulting in most early American basketball leagues being unable to develop and grow. After decades of development, it can be said that there has been a revolutionary change in the commercial operation of the NBA. The success of the NBA is closely related to the level of the league and the excitement of the games from the perspective of the audience, the NBA improves basketball rules, introduces international and black players, intensifies competition among teams in the league, enhances the viewing experience of

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league level games, and encourages viewers to pay for tickets, allowing the league to generate revenue and continue to operate. As the NBA gradually stabilizes its revenue and increases its popularity, more and more teams join the league, leading to an increase in the number and scale of NBA teams, and an increase in the commercial value of the league.

From an economic perspective, the commercial operation of the NBA, in addition to its four main profit models, is of great help in promoting the development of sports related industries. In terms of equipment, NBA athletes have higher performance requirements for basketball shoes, and sponsored sports brands need to continuously research and improve basketball shoes to promote the development of shoe technology. Secondly, there are various types of protective gear, such as tight-fitting clothes, knee pads, ankle protectors, etc., and brands need to constantly design products with better functions. The sports rehabilitation and sports healthcare industries have also benefited to some extent from the NBA, NBA players often suffer from injuries and require professional medical teams to provide support. Medical staff need to constantly learn, and medical equipment manufacturers need to produce more advanced medical equipment in a timely manner. The NBA has also created many job positions for stadium staff, such as security and cleaning. The team's staff, such as players and coaches. Trainers, journalists specializing in reporting on the NBA, etc.

From a political perspective, competitive sports have political functions in peacetime, the commercial operation of the NBA has greatly improved the level of the league, not only improved the basketball level of the United States, but also driving the development of world basketball and leading the trend of world basketball development. Thanks to the development of the NBA, the American men's basketball team has super strength, and it is difficult for any country in the world to compete with it, also known as the "Dream Team". In the world championships that the US men's basketball team participates in, such as the Olympics and the World Men's Basketball Championships, they are often champions and there are few instances of a comeback. The Dream Team has had a profound impact on the national pride of the American people [10]. The NBA has become a business card of the United States, and the public is very concerned about whether they can win or defend the championship and defend national honor. Fans in cities with NBA teams often only support their own teams, but when the US men's basketball team gathers, they will choose to support their national team, which is very beneficial for deepening national identity and unity.

From a cultural perspective, the basketball culture of the NBA has a profound impact on the world. Classic American heroism, Mamba spirit, and others are widely spread, which has taught many NBA enthusiasts to work hard, never give up, learn from their idols, and constantly improve.

But affairs always have two sides, the NBA is no exception, as it creates enormous economic value while also facing drawbacks. The essence of the NBA is a commercial league, and during the game, in order to ensure the smoothness and viewing of the game, the referee's blowing scale may be inconsistent, which affects the fairness of the game. Secondly, there is the emergence of gray industries such as gambling and illegal criminal activities. News often reports on situations where gambling leads to property destruction and family destruction.

5. Conclusion

Through research on the professionalization and commercialization process of the NBA, the degree of commercialization of professional sports leagues is positively correlated with the overall level of the league, league revenue, and other aspects. In order to improve the level of commercial operation of Chinese professional sports leagues, in addition to increasing investment in brand building, efforts should also be made to increase the openness of the league, spread Chinese traditional culture and sports culture to the world, and form China's own league characteristic culture. Actively integrating into globalization economically, utilizing the international market to leverage the economic functions of leagues, driving the comprehensive development of China's sports industry, drawing on and learning from the successful experiences and methods of NBA leagues and game operations, learning from each other's strengths and weaknesses, and integrating them to create a professional basketball game operation and management system that is suitable for oneself in one's own country or region. These measures will have an important positive impact on China's professional basketball league and even professional basketball leagues around the world, which is conducive to the development of basketball in China and the world. In addition to the above aspects, there is a lack of research on the commercial development laws of professional sports leagues in this article. It is hoped that in future continuous research, the commercial development laws of sports leagues can be identified, and more excellent commercial development models of sports leagues can be summarized.

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A Financial Analysis and Valuation of Total Energies

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Abstract: The paper provides a comprehensive analysis of Total Energies (TTE)'s growth strategy, development status, and competitive market advantage. TTE, with a strong global presence in energy and chemicals, has shown remarkable strategic transformation and market performance. Historically, the company has been a leader in the global energy sector. It is now shifting from traditional petrochemical operations to renewable energy and low-carbon power, aiming for a diversified energy network. TTE's carbon neutrality strategy targets 40% natural gas and 40% electricity by 2050 to achieve net-zero emissions. In the international market, TTE's adaptable business strategy, technological innovation, and talent development have ensured growth and customer trust. The company is expanding overseas, achieving significant results, and maintaining social responsibility by promoting sustainable energy development. Despite challenges in its carbon neutrality efforts, TTE remains influential and competitive, being a top global natural gas supplier. The article details TTE's basic information, business, and earnings, highlighting its competitive advantages in product structure, technological innovation, and international development. It also examines TTE's strategic analysis, financial position, and risk assessment. The study assesses TTE's specific businesses in energy and chemicals, exploring internal and external challenges, risk factors, and the impact of technological innovation and energy transformation on competitiveness. The article concludes with countermeasures for identified problems and suggestions for future risks.

Keywords: Total Energies, SWOT Analysis, Financial Valuation

1. Introduction

Total Energies (TTE) operates in the energy sector. The Company is a diversified energy business that manufactures and sells a variety of energy products worldwide, including, but not limited to, oil, biofuels, natural gas, green natural gas, renewable energy, and electricity. The company has 105,000 employees who are committed to providing greener, more economical, and more stable energy that is easily accessible to more people. To this end, French energy giant TTE has entered into a green hydrogen supply agreement with German gas company VNG, under which VNG will supply environmentally friendly hydrogen to the Leuna refinery managed by TTE, thereby reducing CO2 emissions by up to 80,000 tons per year [1]. As one of the world's largest refiners, TTE has always been committed to producing high-quality oil products for customers around the world. The company has expanded to more than 130 different countries and geographies around the world. TTE covers the entire energy value chain, including energy production, conversion, marketing and distribution.

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Globally, the company focuses on the exploration and production of oil and gas, as well as the research and development of renewable energy. TTE is one of the world's largest suppliers of natural gas. TTE's energy resources include not only abundant oil and gas, but also a wide range of renewable energy sources such as wind and solar. In terms of energy conversion, TTE is able to convert primary energy sources such as oil and gas into secondary energy sources such as liquefied natural gas, renewables, electricity and biomass. The company is mainly engaged in energy supply and management services, and is also actively developing clean alternative energy and new energy. In addition, the company has also ventured into refining, chemicals and blending, supplying its customers with a wide range of energy products. In the marketing and distribution of energy, TTE provides the sale of biofuels, fuels, lubricants, polymers and chemicals to individual and commercial customers, as well as energy storage services and a variety of energy efficiency services.

TTE is one of the world's largest multinational integrated energy companies, with a global presence. Europe has always been TTE's main market, with its headquarters in France and its exploration, production, refining and marketing activities for oil and gas in several European countries. In recent years, TTE has increased its investment in the Middle East and North Africa region. In North America, particularly in the United States and Canada, TTE is expanding its commercial activities through the exploration and production of oil and gas, as well as the manufacture and export of liquefied natural gas. TTE operates in everything from oil and gas to refined products. In Africa, especially in West and North Africa, TTE has a strong commercial foothold in the field of oil and gas exploration and production, which is one of its main markets. TTE is involved in several large-scale oil development projects in the Middle East. TTE's core activities include oil and gas exploration, production, refining and chemicals, as well as research and development of renewable energies. Currently, Mobil Oil is one of the world's largest oil producers. In addition to having a significant presence in the refining and chemical industries, TTE has also established an extensive global retail network specializing in the sale of a wide range of petroleum products and related services.

Based on the most recent year's balance sheet data, the TTE revenue for the year ended December 31, 2023 reached 218,945,000 (In USD Thousands). These figures show that TTE has made significant progress in revenue this year and is well positioned to meet the challenges ahead. (1) As global demand for oil continues to rise, TTE has benefited in the near term, which is expected to boost his sales and profitability. (2) On new investment strategies: The company may unveil its new investment plans aimed at increasing production capacity or entering new markets, which will undoubtedly boost earnings. However, the price of raw materials has risen: (1) Due to the instability in the Middle East, the supply of oil has been significantly hit, and the increase in crude oil prices may lead to supply disruptions or price instability, which will adversely affect corporate profits. (2) According to media reports, TTE has recently encountered a series of environmental problems that may involve leaks, environmental pollution or other forms of environmental problems related to the company's operations, which could lead to legal prosecution, fines or reputational damage to the company.

2. SWOT Analysis

2.1. Strength

TTE has excelled in diversifying his energy investments, not only in the traditional oil and gas industry, but also in renewable energy, such as solar and wind. This diverse product portfolio allows the company to flexibly adapt to changes in the market, meet the different needs of a variety of customers, and ensure that it remains competitive in the global energy transition. TTE has a global diversification strategy that includes sectors such as oil, gas, coal and hydropower. TTE has not only

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a global presence, but also a presence in more than 130 different countries and regions, establishing a vast network of markets and resources. In TTE's view, profitability can only be achieved better by operating globally, that is, by using limited capital where it matters most. Such a global strategy helps to reduce risk and identify market opportunities in various regions. In addition, TTE's internationalization strategy is one of the important factors for the success of globalization. In addition, TTE has excellent R&D capabilities and invests heavily in R&D every year.

TTE has also partnered with PetroChina on a series of demonstration projects. In the area of CCUS technology, the two companies plan to deepen their joint research and work on the development of new technological means, and TTE announced that it has signed a framework agreement with Abu Dhabi National Oil Company to pursue opportunities for joint R&D and deployment in the CCUS field, including carbon capture technologies, sequestration solutions, and enhanced field development projects based on CO2 recovery [2]. Especially when it comes to energy efficiency and renewable energy technologies. The two companies are making progress in their efforts to improve energy efficiency and reduce greenhouse gas emissions. This ensures that it is always at the forefront of new technology development and practical application. This is mainly due to its great potential in the oil extraction industry.

TTE has significant capabilities in the field of global oil exploration, and TTE has extensive exploration capabilities worldwide. Over the past few years, TTE has successfully achieved its goal of transforming from a traditional oil company to a modern oil company. In 2022, for example, TTE detected abundant light oil and associated natural gas resources at the Venus 1-X prospect off Namibia, West Africa, adding up to 667 million tonnes of oil equivalent, making it the largest case of global oil and gas discovery that year. At the same time, it has achieved real-time perception and analysis of well location information through cooperation with other companies, thereby helping managers quickly identify potential faults [3]. TTE has also made significant breakthroughs in the field of intelligent exploration. For example, the ARGOS robot, developed by TTE and PetroChina, is capable of monitoring and maintaining offshore oil rigs under extreme conditions and performing high-risk and time-consuming oil and gas field tasks. The application of this intelligent exploration technology not only improves the efficiency of exploration, but also reduces the risk in the exploration process.

2.2. Weakness

Although TTE is a strong multinational energy company that spans multiple business sectors such as oil, gas and renewables, it still has some significant shortcomings. In terms of energy mix, TTE is currently focused on the oil and gas sector. Although it relies primarily on traditional energy sources, its core business covers oil and gas, the extraction and application of which have a profound impact on the environment. At present, TTE is carrying out a series of reforms to adapt to the challenges of the new situation. Given the growing global demand for environmental protection and sustainable development, TTE urgently needs to accelerate the transformation of its energy mix to reduce its dependence on fossil fuels. In addition, due to the frequent price fluctuations in the global oil market, TTE is also exposed to significant risks. As an energy company that relies heavily on oil and gas, TTE faces greater environmental challenges and pressures, especially when it comes to tackling climate change and reducing carbon emissions. As a global energy giant with oil at its core, TTE's earnings and earnings are largely dependent on oil prices [4]. Oil prices are closely related to the world economy. Global supply and demand conditions, geopolitical dynamics, and other macroeconomic factors can all affect the volatility of oil prices. Africa is one of the most important components of the global oil and gas market and is also the region with the highest concentration of oil and gas exploration and development activities. In recent years, Africa has increasingly been influenced and infiltrated by Boko Haram, ISIS and Al-Qaida. The political turmoil in these countries

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has exacerbated international concerns about the security of oil and gas supplies. In addition, Africa's resource countries face the challenges of political instability and inadequate governance capacity. These countries are potential customers for international oil companies, but their domestic political instability also poses certain risks to Africa. This leaves foreign investors in Africa still exposed to a high degree of risk [5].

TTE is one of the world's largest non-oil and gas companies, primarily engaged in the exploration, development and sale of petroleum and the trading of petroleum products, as well as mineral exploration and engineering services. At present, there are increasing tensions between oil-producing countries, which can lead to supply disruptions or price instability, which can have a negative effect on TTE's business activities. TTE is the world's largest non-OPEC oil producer and one of the most important international energy companies, as well as the second largest oil producer in the Middle East. In recent years, there has been a marked decline in the investment climate in Iraq, which has made the high security risks facing Iraq a serious problem. Due to the increased uncertainty of the war in Iraq and the sanctions imposed by the Iraqi government, TTE faces enormous challenges in Iraq. In recent years, the Islamic State has emerged as a major security concern. Subsequently, clashes between Iranian-backed Shiite militias and U.S. forces posed a huge security threat to foreign investors. In addition, TTE is under pressure from other oil companies as well as from the government [6]. In the second quarter of 2023, for example, the company's net profit decreased by 49% year-on-year due to the decline in oil prices. As a result, TTE will continue to maintain its leadership position in energy and infrastructure for years to come. Such fluctuations in performance may adversely affect the long-term development of the company and investor confidence. Over the past few years, TTE has seen a gradual decline in market share in the global oil and gas sector, which has put him under competitive pressure from rivals such as Shell and ExxonMobil. TTE has invested relatively heavily in capital, which may hinder his further development and expansion in the new energy industry.

2.3. Opportunities

In terms of future opportunities, TTE faces the following important opportunities.

Global energy transition: As global climate change and environmental issues become more prominent, more countries are trying to shift their energy models to a greener and low-carbon direction. As a global oil company, TTE is committed to providing customers with cleaner and more efficient energy technologies and services to help them meet increasing environmental challenges. TTE launched his energy transition plan at an early stage, especially in the field of renewable energies, which created a huge market potential for him [7].

In the context of continuous technological progress, digitalization and intelligence are gradually regarded as the core development direction of various industries. As an established oil company, TTE has a strong foundation and experience in digitalization. Leveraging advanced technologies that are digital and intelligent, TTE is able to improve its efficiency and product quality in all aspects of exploration, production, processing and transportation. With the most advanced equipment and tools in the world, TTE is able to offer a variety of solutions to meet the needs of different customers for high-quality services. TTE has always been a leader in the oil and gas industry, particularly in terms of its stand-alone exploration technology, its ability to operate large gas and LNG, and its deepwater and ultra-deepwater operations [8]. Reduce operating expenses and increase profitability potential.

In response to climate change and environmental challenges, governments around the world have launched a series of policy measures aimed at supporting the development of renewable and low-carbon energy. Large energy companies such as TTE are also actively involved in energy conservation and emission reduction actions around the world. These strategies have created a broader scope for growth for TTE and other energy companies, especially in the renewable energy sector.

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2.4. Threats

Although ExxonMobil has a modest investment in renewable energy, its strong oil and gas business strength and market share as one of the world's largest oil and gas companies have challenged TTE. As one of the world's largest privately owned oil and gas companies, Shell competes fiercely with TTE in a variety of industries, including oil, gas and renewables. TTE has a leading edge in the development and production of oil and gas resources, which is in indirect competition with Shell [9]. Shell's significant market presence in the LNG industry poses a direct risk to TTE's commercial activities in this sector. Shell is another important multinational energy group that has an indirect impact on TTE’s market share in this sector. Shell is also actively driving the energy transition, investing heavily in renewables and power, and competing with TTE in the new energy market. Chevron has leading technology and scale in shale gas extraction, and forms indirect competition with TTE. Chevron is a globally influential company in the energy sector, competing with TTE in oil, gas and renewable energy. TTE is an established multinational energy company with operations around the world, but in recent years it has encountered competition from many countries and regions on a global scale. Chevron has deep experience and technological superiority in the field of oil and gas exploration and production, and has formed a direct market competition with TTE. Chevron has also made plans in its energy transition strategy, and its investment in renewable energy and low-carbon technologies may pose a hidden danger to TTE's market share in the new energy industry. British Petroleum (BP) is a globally renowned energy company with a wide overlap in its business areas. The company also attaches great importance to the energy transition and sustainable development, actively invests in renewable energy and low-carbon energy technologies, and competes fiercely with TTE in the field of new energy.

3. Valuation

3.1. Financial Performance

For TTE's financial situation, it can be analyzed from several specific angles.

TTE is a globally renowned energy company with a wide range of activities in the oil, gas and clean energy sectors. TTE's business consists of three main segments: refining, petrochemicals and chemicals. This is followed by a financial assessment based on recent earnings data. TTE is the largest independent oil producer in the United States, with exploration and development operations and the sale and distribution of refining and petrochemical products. In the first quarter of 2024, TTE’s TTE revenue reached $51.883 billion, a decrease of 10.90% compared to the previous year. TTE's performance declined over the past year due to factors such as rising crude oil prices and falling natural gas prices. This means that in the context of the global energy market, TTE's revenue has suffered to some extent. Despite a significant drop in revenue, TTE's net profit still achieved double-digit growth. In the first quarter of 2024, TTE's net profit attributable to its parent reached $5.721 billion, an increase of 2.95% compared to the previous year. The increase in revenue was due to TTE's better performance in the first half of the year. While revenue has decreased, the company's net income growth does reflect its efforts in cost management and operational efficiency.

In addition, after adjusting for the first quarter of 2024, TTE's net profit reached $5.1 billion, a decrease of 22% compared to the same period last year, which may be closely related to market conditions, fluctuations in oil prices and the company's investment strategy. Under the double blow of the global financial crisis and the sharp drop in oil prices, TTE's profitability declined in the first quarter of this year, but it still achieved its full-year performance target. Compared with other major oil companies, TTE shows both similarities and obvious differences in its response strategies. Compared with traditional energy companies, TTE has a higher technological innovation capability.

One thing in common is that they have all implemented strategies to reduce costs, increase efficiency, and reduce spending; The difference is that TTE is not reducing investment efficiency while cutting spending, but improving investment efficiency by optimizing resource allocation. It is worth noting that although the company has cut expenses and adopted a cautious investment strategy, it has not reduced its investment in the new energy and low-carbon business areas. Instead, it has successfully coped with a variety of pressures, from various renewable energy generation to battery and energy storage businesses, to R&D efforts on e-mobility and CCUS [10]. Taking into account the price and market value of the stock, as of the most recent trading day, TTE closed at $71.52, giving it a market value of about $171.3 billion. It was also the largest deal in TTE's history. TTE's share price continues to climb, reflecting the public's expectation and trust in his future performance.

3.2. Ratio Analysis

TTE's net profit increased by 2.95% compared to last year, which shows his excellent performance in terms of profitability. In addition, due to the company's greater efforts to control costs, the company's profit growth rate is significantly higher than the average level of the same industry. However, given that revenues are decreasing, companies still need to focus on cost management and go-to-market strategies. In order to evaluate performance more accurately, it has selected Walmart, Amazon, and Alibaba as the three main competitors based on a reasonable assessment of market value, as detailed in Table 1.

Table 1: Market capitalization of TTE and its competitors.

Company Code	Market capitalization ($billion)
TTE	169.815
XOM	456.166
COP	138.344
CVX	291.458

From Table 2 presented, it is clear that the TTE NTM PE and TTM PE values are the lowest, while the NTM PE values are significantly lower than ConocoPhillips' NTM PE (13.79), and the TTM P/E values are also significantly lower than ExxonMobil's TTM PE (14.27). From the perspective of the company as a whole, the company's overall valuation is at a reasonable level. In terms of inputs: TTE has the lowest price-to-earnings ratio, so the investment per unit profit is relatively small.

Table 2: P/E ratios of TTE and its competitors.

	TTE	XOM	COP	CVX
TTM P/E	11.55	14.27	9.36	8.12
NTM P/E	11.92	12.32	13.79	7.81

Compared to other companies, TTE’s earnings per share are relatively low, so its profitability is also relatively weak (see Table 3). Oil and gas extraction companies with higher earnings per share. In addition, EPS is growing at a relatively slow pace, and its earnings growth potential is not as good as that of other companies. TTE is a multinational oil and gas company that provides crude oil extraction services on a global scale, from upstream to downstream. TTE estimates that earnings growth in 2024 will be around 2. 14%, which is slightly lower than the 2% in the U.S. oil and gas consolidation industry. 92% average growth rate, and also significantly lower than the U.S. market9. Expected growth rate of 12%. In the case of the global economic downturn and low international oil prices, TTE still maintains a stable development trend. Oil companies' earnings and earnings are largely influenced by oil prices, which have experienced sharp fluctuations due to a combination of politics and supply and demand, resulting in a 16% reduction in the TTE revenue of the four companies compared to last year. In terms of operating costs, all four companies have decreased. The overall decline is relatively small, so it has a certain degree of comparative superiority.

Table 3: Expected growth ratios of TTE and its competitors.

	TTE	XOM	COP	CVX
EPS growth rate	1.25%	15.0%	2.2%	18.86%
Expected gross revenue	2.14			
Revenue Growth Rate	-15.85%	-16.05	-28.48%	-16.46%
EPS	\$8.86	\$8.16	\$9.06	\$10.87

Regarding to TTE's ROE, its lower ROE means that the company invests more money in profitability, or only a portion of it, and thus makes less profit than other companies, which is not only detrimental to attracting shareholders, but can also adversely affect financing. Therefore, it should focus on the asset quality of a company. From the perspective of operating profit margin, it describes the ratio between a company's operating profit and its operating income. If the operating margin is higher, it indicates that the company is more profitable. This demonstrates a company's earning potential in the process of manufacturing and selling products or services. From the earnings per share, it can be found that the company will invest a lot of money in the process of operation to maintain operations, which makes the company's operating performance worse than that of listed companies in the same industry. Overall, TTE has a high operating margin, which indicates that it is able to manage costs more efficiently and increase profitability. From the perspective of PEG ratio, TTE has the lowest PEG ratio as Table 4 shown, which results in its share price being relatively undervalued, while the current share price is also the lowest, which provides a large margin for its future earnings potential and magnitude.

Table 4: PEG and profit ratios of TTE and its competitors.

	TTE	XOM	COP	CVX
PEG	1.76	4.03	2.73	2.36
Operating profit margin	15%	13%	26%	13%
ROE	10%	11%	20%	11%

3.3. Profitability Analysis

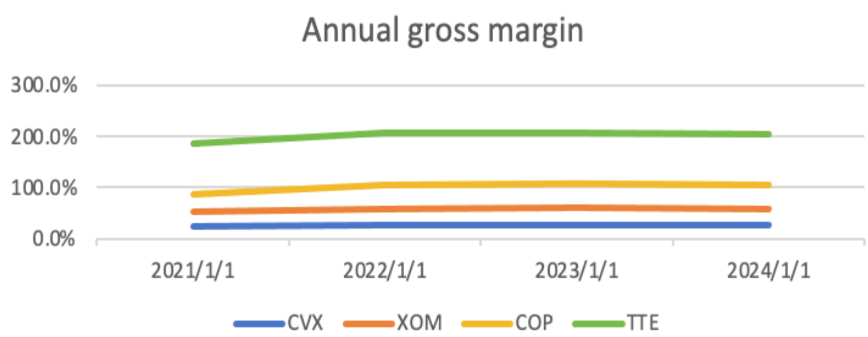

Figure 1: Annual gross margin of TTE and its competitors (Photo/Picture Credit: Original).

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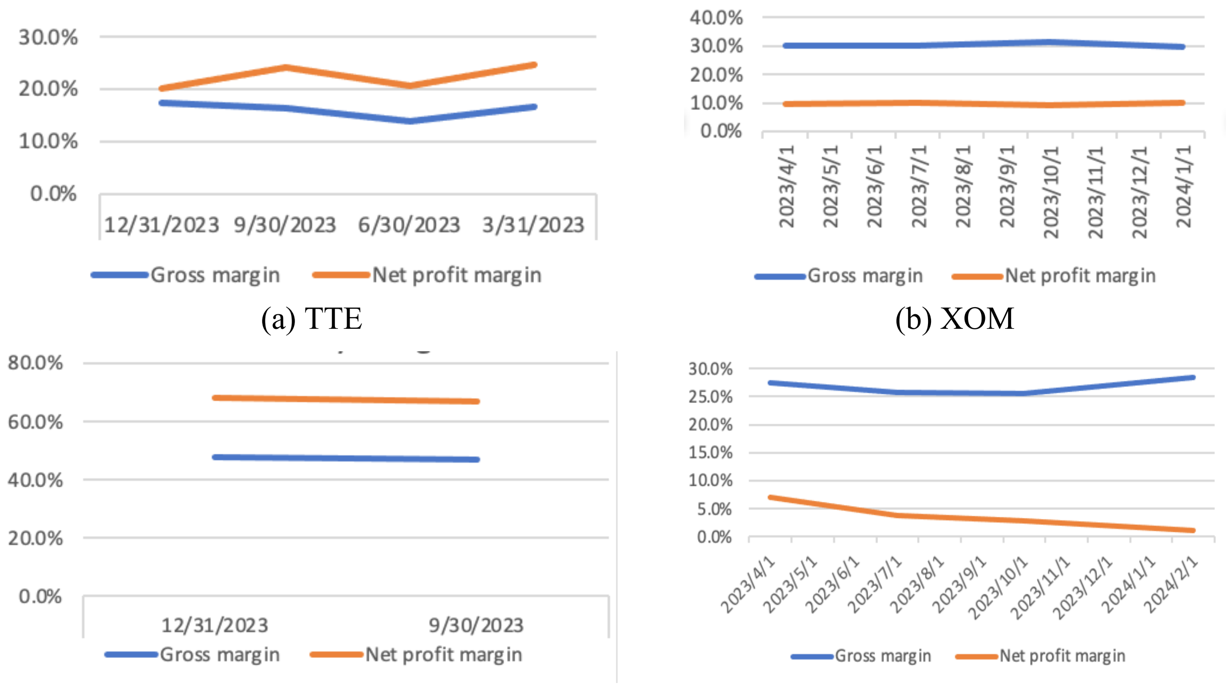

(a) TTE (b) XOM

(c) COP (d) CVX

Figure 2: Quarterly profit margin of TTE and its competitors (Photo/Picture Credit: Original).

TTE has been able to increase the company's overall gross margin by aligning its product line, accelerating the energy transition, and launching more high-margin products (see Figure 1). As the global economy enters a period of deep adjustment, how to achieve low-carbon development has become an urgent issue. In order to achieve the goal of zero carbon, it not only need to make in-depth adjustments to the energy structure and accelerate the construction of a new energy industrial system, but also need to strengthen the clean use of traditional energy and promote the high-quality transformation of energy consumption according to the actual situation of resources [11]. TTE showed a high degree of stability in gross margin growth, ranking first in the list, as Figure 2 shown. At the same time, TTE's quarterly gross margin growth rate was relatively stable. From the perspective of operating income, TTE reached an operating income of \$56.278 billion in the first quarter of 2024, a decrease of 10.1% compared to the previous year. The main reason is due to the rise in production costs caused by the rise in upstream raw material prices and the company's adjustment of future business development strategy. The company's sales are gradually decreasing, which may be related to market conditions or the company's business strategy. However, looking at the net profit data for 2021-2023, the overall growth of net profit shows a solid upward trend, and although it has declined due to various factors in 2023-24, it still holds the top spot. In terms of operating performance, TTE's profits mainly come from non-oil business. During the same time period, TTE's net profit reached \$5.1 billion, an increase of 3% compared to the previous year. While TTE's operating performance continues to improve, it should also note that the company's operating efficiency and profitability have declined to a certain extent. Although the company's operating income decreased, net profit increased, perhaps due to the implementation of effective cost control strategies or the outstanding performance of certain businesses.

Taking into account the annual growth of gross margins, TTE has significantly outpaced other companies in terms of annual growth, showing strong momentum. In terms of operating income growth rate, TTE is also higher than other industries. TTE's expansion in several energy sectors, such as oil, gas, and renewables, may be the reason for this. In the course of TTE's development, it can

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find that TTE has strong competitiveness in various industries. Adopt a diversified business strategy. TTE was able to keep costs low while achieving above-average margins. This strategy helps to reduce reliance on a single market and achieve consistent gross margin improvement across a variety of market environments. In addition, TTE can also increase its profitability through mergers and acquisitions. TTE has invested heavily in research and development of new energy, environmental technologies and energy efficiency improvements, and has successfully integrated these innovations into his business, which is expected to generate higher profits for him. In the coming years, TTE's gross profit growth will remain high, but profitability will decline. In contrast, if other companies underinvest or grow slowly in these particular areas, their annual gross profit growth rate may be negatively impacted. In addition, TTE's profitability is constrained by its business model. In the first quarter of 2024, TTE's net profit decreased by 3% year-on-year, while Mobil, Chevron and several others saw more significant year-on-year declines of 28.1% and 16.3%, respectively. TTE also saw a decline in revenue. This means that, in certain areas, TTE may be more adaptable than other options, potentially achieving faster annual gross profit growth.

4. Risk Assessment

TTE is one of the world's leading energy companies, with strong capabilities in oil, gas, biofuels, renewables and electricity. As the world's largest integrated energy supplier and investor, TTE is committed to providing safe, clean and efficient energy solutions to help them realize more value. However, as the global energy sector continues to expand and competition between industries intensifies, TTE also faces many risks and tests.

TTE, as a major oil and gas producer, is heavily influenced by fluctuations in crude oil prices. TTE is one of the world's largest energy companies, and its operations are directly affected by changes in oil market conditions, including rising and falling oil prices. Given the growing tensions between oil-producing countries, which could trigger supply disruptions or price instability, a decline in crude oil prices could reduce a company's earnings and, in turn, its earnings potential. As a result, higher oil prices will put TTE under greater financial pressure. In addition, global climate change and environmental issues are becoming more severe, which also poses the risk of reducing energy demand. Therefore, more and more countries and regions have begun to actively promote the development of clean energy to reduce their dependence on traditional energy sources. Against this backdrop, TTE's market share will shrink. This has the potential to reduce the demand for conventional energy sources, creating market risks for TTE.

TTE's financing costs, return on investments, and balance sheet are all affected by interest rate fluctuations. In the long term, changes in interest rates will change TTE's capital structure. When interest rates increase, TTE's earnings potential suffers as it leads to higher funding costs for the company, while lower interest rates can reduce the company's return on investment. As a result, TTE is very sensitive to changes in interest rates. The volatility risk of TTE's financial markets is primarily related to the instability of prices, exchange rates and interest rates for oil, gas and electricity. These risks also exist in all stages of the business activities of enterprises, including production, sales, procurement, finance and other links. These risks are inevitable and inevitable that businesses must face in the course of their day-to-day operations [12].

The energy sector, in which TTE operates, is classified as a high-risk sector. Because the energy industry involves many risk factors, accidents can easily occur in the process of production and operation. If a security incident occurs, this will not only result in personal injury or property damage, but also serious damage to the company's reputation and image. Risks related to environmental policies: With the increasing awareness of environmental protection around the world, many governments have begun to implement stricter environmental protection measures. One of the most important and common of these environmental policies is to require companies to reduce their emissions. TTE may face a decrease in costs and profitability due to increased environmental investments.

The earnings per share level is relatively low, and its earnings potential is not as good as that of other companies. From the perspective of industry, the growth of listed real estate companies is the best, while the growth of other industries is relatively poor. In addition, the growth rate of EPS is relatively slow, and its profitability is not as good as that of other enterprises, which has a negative effect on the future development of the company and the competition of the entire industry. TTE Energy has operations around the world and its financial receipts and payments may be settled in multiple currencies. Since a company's balance sheet often records amounts in foreign currency, changes in exchange rates can lead to changes in accounting treatments. Due to the volatility of exchange rates, the Company may be exposed to the risk of foreign exchange gains and losses, which may further affect its financial health.

With the growing global focus on climate change issues and the continuous advancement of new energy technologies, the demand for traditional fossil fuels is likely to decrease, which undoubtedly poses business challenges for TTE and other energy companies. In addition, energy companies are exposed to greater risks due to the volatility of international oil prices and the monopoly position of oil majors in the international market. Especially under the influence of unexpected situations such as the Palestinian-Israeli conflict and the Russia-Ukraine conflict, the global energy demand may undergo significant changes, which will further increase the company's operating risks.

TTE uses a wide range of raw materials such as oil and gas on a large scale in its main business activities. The company's operating costs may be directly affected by fluctuations in the prices of these raw materials. In addition, because raw materials are irreplaceable important materials in the production process of products, the fluctuation of raw material prices will have a certain degree of impact on the production cost of products. Due to the conflict between Russia and Ukraine, tensions in the Middle East, and the instability of the global oil supply chain, the price of raw materials has fluctuated, which has further led to an increase in product and operating costs.

5. Conclusion

TTE, a global leader in the energy sector with a large business scale and a considerable market share, is actively responding to the changes and challenges in the energy market in order to achieve its strategic transformation and sustainable development goals. The company invests heavily in technological innovation and research and development with the aim of improving the efficiency of energy conversion and reducing the TTE cost of production. By investing in the new energy industry, it has contributed to national energy conservation and emission reduction. In addition, related technologies have also been introduced into the field of renewable energy and electricity, further promoting the progress of clean energy. TTE has performed well financially, maintaining high earnings potential and excellent performance even in the face of challenges such as global pressures. TTE attaches great importance to risk management and has built a comprehensive financial risk management framework and operating cost control program to reduce operational and market risks. In addition, TTE is also actively facing the issue of carbon emissions and environmental protection, and has implemented a series of strategies aimed at reducing carbon emissions, thereby reducing its negative impact on the environment. Overall, as a global leader in the energy sector, TTE has demonstrated excellent performance in many aspects such as business scale, strategic transformation, technological innovation and risk management, so it has a high market competitiveness and position. Looking ahead, in the face of the continuous evolution of the global energy market and increasing competition, TTE plans to further strengthen its technological innovation and risk management capabilities to better meet the challenges and ensure its leading position in the industry.

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Artificial Intelligence in Internet Marketing and Its Future Trends

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Abstract: In the digital era of the 21st century, Artificial Intelligence (AI) has become a core technology that drives innovation and efficiency in Internet marketing. This paper explores in detail the applications of AI in Internet marketing, including personalized marketing, customer service automation, market analysis, and marketing channel optimization. These applications not only improve the market competitiveness and customer satisfaction of enterprises but also promote the personalization and efficiency of marketing strategies. However, the widespread application of AI technology is also accompanied by risks such as data privacy, algorithmic bias, uncontrolled automation, and technology dependency. These risks threaten consumers' rights and interests and may affect the sustainable development of enterprises and social trust. Therefore, this paper emphasizes the importance of establishing strict data protection policies, enhancing algorithmic transparency, and preserving appropriate space for human intervention. AI is expected to continue to drive Internet marketing toward greater efficiency and personalization. In particular, conversational AI, content creation, and integration with augmented reality (AR) and virtual reality (VR) will provide users with a more immersive and personalized shopping experience. However, as technology evolves, ethical and privacy protection challenges will also become increasingly prominent, requiring businesses, regulators, and technology developers to work together to ensure the responsible use and healthy development of AI technologies. Through continued innovation and accountable practices, AI technology will shape the future of Internet marketing while ensuring that society's ethics and responsibilities are upheld.

Keywords: Artificial intelligence (Al), Internet marketing personalization, ethics, and privacy protection technology

1. Introduction

In today's rapidly evolving digital era, Artificial Intelligence (AI) technology has become a key force in driving marketing innovation and efficiency. With the continuous advancement of data technology and increased computing power, the application of AI in the field of Internet marketing has become increasingly widespread. From personalized recommendations to consumer behavior analysis, AI technology not only optimizes user experience but also greatly improves the accuracy and effectiveness of marketing campaigns. However, despite the unprecedented opportunities that AI brings to Internet marketing, it also raises a series of new challenges and ethical issues, especially in

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terms of data privacy and algorithmic transparency. This dissertation aims to delve into the specific applications, potential risks and issues, and future trends of AI in Internet marketing. In addition, the thesis will predict the potential impact of AI in the future of Internet marketing, providing strategic guidance and policy recommendations for marketing professionals and policymakers. Through these studies, it is expected to provide a comprehensive perspective for understanding and utilizing this disruptive technology, while promoting its healthy and sustainable development in global marketing practices.

As one enters the third decade of the twenty-first century, one finds that the Internet has revolutionized the way consumers buy and the marketing behavior of brands. In this context, the emergence of AI is not only an inevitable result of technological development but also a natural response to market demand. AI enables machines to perform complex tasks such as visual recognition, speech recognition, and decision support by mimicking human intelligence processes. In the field of marketing, the application of this technology has facilitated the shift from traditional to digital marketing and is driving the evolution of digital marketing to smart marketing.

Taking personalized recommendations as an example, by analyzing consumers' purchase history, search habits, and social media activities, AI can help companies predict consumer behavior and preferences to provide more accurate product and service recommendations. This strategy not only improves consumer satisfaction and loyalty but also increases a company's sales and market share.

However, the use of AI in Internet marketing is not without risk. Data privacy has become a hot topic. Consumers are increasingly concerned about how their personal information is used, and they fear that their data will be misused. In addition, algorithmic transparency is a widespread concern. Since the decision-making process of most AI systems is a black box, it is difficult for consumers and regulators to understand and monitor how these systems work.

In the future, the use of AI in Internet marketing is expected to continue to grow, but this growth must be accompanied by a deeper understanding of the potential impact of the technology and appropriate regulatory measures. Regulatory frameworks need to be continually updated to protect consumer rights while promoting the healthy development of the technology. Businesses and marketing professionals should recognize that, while AI can bring significant economic benefits, the technology should be used responsibly to ensure that its innovations do not harm consumers.

Therefore, this paper will first outline the main applications of AI in Internet marketing, analyzing the technological principles behind these applications and the advantages they offer. Next, the paper will explore the ethical issues and challenges that these technologies may raise, particularly in terms of data privacy and algorithmic transparency. Finally, the paper will explore future trends in AI in Internet marketing and provide forward-looking insights and recommendations for marketing professionals and policymakers. By analyzing these key issues in depth, this paper hopes to inform and inspire the future development of global marketing.

2. The Role of Artificial Intelligence in Internet Marketing

2.1. Innovation and Impact of Personalized Marketing

In the contemporary era of globalization and rapid technological development, Artificial Intelligence (AI) technology has become a key force driving marketing innovation and efficiency. With the continuous progress of data technology and the enhancement of computing power, the application of AI in the field of Internet marketing has become increasingly widespread, greatly enhancing the market competitiveness and customer service level of enterprises. Personalized marketing is one of the core applications of AI in Internet marketing. By analyzing consumers' purchase history, browsing habits, and social media activities, AI can identify consumers' preferences and interests so as to provide accurate product recommendations and customized marketing messages. Amazon is a

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pioneer in this field, and its recommendation algorithm provides personalized product recommendations based on customers' purchase history and browsing behavior, which greatly improves customers' willingness to buy and satisfaction [1]. This personalization not only enhances the user experience but also effectively improves the conversion rate and customer loyalty. In addition, streaming service providers like Netflix and Spotify also use AI to analyze users' viewing and listening habits and recommend movies and music that match their tastes, and this strategy has become an important means of attracting and retaining their users.

2.2. Using AI to Enhance Customer Service: Innovation and Effectiveness of Chatbots

Another major application of AI is in the field of customer service, especially service automation through chatbots. These AI-powered chatbots are able to provide instant response 24 hours a day to handle user inquiries and resolve issues, greatly improving response time and service quality. For example, Sephora's virtual assistant can interact with customers on multiple platforms to provide cosmetic recommendations and related consulting services [2]. The application of this technology not only optimizes the customer service process but also reduces the operating costs of the company. Further, with the development of technology, the ability of these AI systems to handle complex interactions and provide personalized services is improving.

2.3. Improving Strategy Adjustment and Marketing Efficiency

In addition, robots can improve their conversation patterns and service quality through continuous learning to increase customer satisfaction. In addition to this, AI can make market predictions through many algorithms. The development of AI technology has greatly enhanced the ability to analyze markets and predict trends. Companies are able to utilize machine learning algorithms to extract insights from large amounts of data and predict market trends to adjust their marketing strategies more effectively. The Coca-Cola Company uses machine learning to analyze consumer sentiment on social media to optimize its advertising and marketing strategies [3]. In this way, AI helps companies adjust their marketing strategies in real-time to improve the efficiency and effectiveness of their marketing campaigns.

2.4. Key Role of AI in Optimizing Marketing Channels and Improving Advertising Efficiency

Finally, AI also shows great potential in marketing channel optimization. By analyzing user interaction data on different marketing channels, AI can help companies identify the most effective advertising channels and delivery times, so as to optimize advertising budget allocation and content strategy. For example, by analyzing users' online behavior and feedback data at various times, AI can predict the best time to place ads and improve ad reach and conversion rates. This data-driven channel optimization strategy not only improves ad placement efficiency but also ensures maximum return on marketing campaigns.

From this, it can be seen that the application of AI technology in the field of Internet marketing is extensive and in-depth, and its ability to personalized recommendations, customer service automation, market analysis, and marketing channel optimization show significant advantages. With the continuous progress of technology and deepening applications, AI will continue to drive Internet marketing in the direction of greater efficiency and personalization.

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3. Potential Risks and Issues

3.1. Importance of Data Privacy

Artificial Intelligence (AI) technology plays a huge role in improving and innovating Internet marketing practices, but its widespread use also brings several risks and challenges. These risks not only affect consumer rights but also pose a threat to business sustainability and social trust. The following content will delve into the major risks and issues that may arise from the application of AI on the Internet.

Data privacy is one of the biggest concerns for Internet users. the efficient operation of AI systems relies on a large amount of personal data, including consumer behavioral data, purchase history, personal preferences, etc. While the collection and analysis of such data can enhance marketing efficiency, it also greatly increases the risk of personal privacy violations. If the data is not managed properly, it may lead to major data leakage incidents, thus violating user privacy and triggering public discontent. For example, Facebook was widely criticized for failing to properly protect user data in the Cambridge Analytica scandal [4]. In addition, even encrypted stored data is often exposed to Advanced Persistent Threats (APTs) from hackers, which are attacks that can bypass traditional security measures and gain access to sensitive data. Data breaches not only compromise the privacy and security of affected individuals but can also lead to damage to an organization's reputation, lawsuits, and huge financial losses. As data breaches continue to come to light, public concern over how organizations collect, use, and protect personal information is growing, calling for stricter data protection regulations and technical measures to guard against the problem. For organizations, enhancing data security and adopting transparent data management policies are not only legal and ethical requirements but also key to maintaining customer trust and business success.

3.2. Algorithmic Bias: Injustice and Challenges in AI Systems

Second, AI systems and algorithms may inadvertently incorporate human biases during the design and training process, and such biases, once amplified by the AI system, may lead to unfair and discriminatory decision-making. Research has shown that gender, racial, or age bias can be present in AI systems ranging from hiring recommendations to credit approvals [5]. For example, Amazon had developed a hiring tool that was later found to be biased in favor of selecting male candidates due to the predominance of males in its algorithmic training set, leading to unfair treatment of female candidates [6]. This algorithmic bias not only harms the affected groups but also poses a challenge to social justice and equality. Therefore, the algorithmic bias of AI may also lead to Internet marketing being marketed. In addition, algorithmic bias may also lead to economic inequality, e.g. credit approval systems may reject loan applications from certain groups due to bias, thus hindering their economic opportunities. Countermeasures include increasing algorithmic transparency, diversifying training data, and implementing stricter regulatory measures. By doing so, the occurrence of bias can be reduced, and the fairness and effectiveness of AI technology can be ensured.

3.3. Risks of Uncontrolled AI Automation: Potential Impact on Businesses and Markets

In addition, as AI is widely used in marketing automation, the risk of automation going out of control increases systems may exhibit unpredictable behaviors due to programming errors, design flaws, or external attacks, which can lead to misdirected advertisements, flooding of information, and even economic losses. For example, the 2010 stock market "flash crash" was partly due to automation loss caused by high-frequency trading algorithms, demonstrating that even highly optimized AI systems can lead to unintended consequences [7]. This incident underscores the ability of high-frequency trading systems to quickly amplify problems during market turmoil and highlights the challenges

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faced by regulators in preventing technological risks. The loss of control of AI systems can lead to a variety of problems in online marketing, which not only affect a company's brand image and customer trust but also may lead to financial losses and legal liabilities. Therefore, developers and enterprises must conduct rigorous risk assessments and continuous security monitoring when designing and deploying these systems to ensure the robust operation of the technology and the overall stability of the market.

3.4. Industrial Intelligence Dependency Risk: The Need to Maintain Human Oversight

As businesses and consumers rely more and more on artificial intelligence (AI) technology, it may lead to a weakening of reliance on traditional skills. In some cases, over-reliance on AI for decision-making may degrade the intuition and judgment of human decision-makers, resulting in a lack of responsiveness when faced with complex problems that cannot be solved by AI systems. For example, if an automated marketing system fails, it could bring the entire marketing campaign to a standstill or even cause data loss or leakage. Therefore, organizations need to adopt AI technology while maintaining appropriate human oversight and decision-making capabilities to prevent the impact of technology failures.

When designing AI systems, failover, and manual intervention mechanisms should be included to ensure that operations can be resumed quickly in the event of a technology failure, reducing the impact on the business. It is also critical to develop technological sensitivity and problem-solving skills among employees, which can help them make more informed decisions based on the information provided by AI systems. While technology can provide an efficient means of communication, an over-reliance on technology can diminish the quality and depth of interpersonal communication. Human interaction still plays an irreplaceable role in building customer relationships and brand loyalty.

Overall, AI technology has brought a lot of convenience to Internet marketing, but it also comes with risks such as data security, algorithmic bias, loss of control of automation, and technology dependency. Effective management of these risks requires the concerted efforts of enterprises, regulators, and technology developers to formulate strict data protection policies, ensure the transparency and fairness of algorithms, and retain an appropriate margin for human intervention in automated systems.

4. Future Trends

With the rapid development of artificial intelligence (AI) technology, its use in Internet marketing is revolutionizing the landscape. This paper will look at four key trends that AI is likely to exhibit in the future of Internet marketing and discuss in detail how these technologies are shaping the future of marketing.

4.1. Trends in Conversational AI and Intelligent Customer Service

The role of conversational AI and intelligent customer service technologies will become increasingly important in the future of Internet marketing. As artificial intelligence technology continues to develop and improve, conversational AI will provide a more natural, smooth, and highly personalized user interaction experience. These systems will provide faster and more accurate responses by accurately understanding user language and intent through more advanced natural language understanding (NLU) capabilities. Natural Language Understanding (NLU) is a subfield of the Artificial Intelligence (AI) field focused on enabling computers to understand unstructured data provided in the form of text or speech [8]. Intelligent customer service systems will utilize machine learning and big data analytics to not only handle routine queries but also proactively anticipate user

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needs and provide preventative solutions. Overall, the development of conversational AI and intelligent customer service will greatly facilitate customer service automation, improve service efficiency, reduce costs, and ultimately improve overall user satisfaction and enterprise operational efficiency. As these technologies mature and become more widely used, the future of customer service will become more intelligent and personalized.

4.2. Automation and Personalized Marketing Content Production

The use of AI will extend to content creation, enabling marketing teams to efficiently generate a variety of marketing content, including text, images, and videos. Utilizing AI tools, such as generative design algorithms, companies will be able to automate the content creation process, not only saving time and resources, but also keeping the content innovative and engaging. In addition, AI will also play a key role in content personalization and optimization, ensuring that content is matched to the specific needs and interests of consumers [9].

4.3. AI, AR, and VR: Shaping the Future of Internet Marketing as an Immersive Experience

The convergence of Artificial Intelligence combined with the development of Augmented Reality (AR) and Virtual Reality (VR) is creating a new immersive shopping experience. With the rapid evolution of digital marketing and online technologies, traditional mass media advertising is losing its edge. Modern marketing strategies are focusing more on leveraging consumer behavioral data, preference analysis, online search history, and search engine optimization in order to pinpoint consumer needs. Augmented Reality Experience Marketing (AREM) uses this data to enhance customer satisfaction and help companies achieve results in maintaining customer relationships and increasing customer loyalty, while VR enhances the user experience through emotional and intellectual interactions. Gamification strategies enrich the user experience through diverse interactive technologies designed to enhance user engagement and increase brand value. In the 21st century, the combination of AI with AR and VR, as well as gamification technologies, has become an essential and emerging tool for businesses to compete [10].

AR technology allows consumers to "try on" clothes or "try out" products, such as furniture, without leaving their homes, and AI can further enhance this experience by analyzing a user's preferences, body type, and past purchases to recommend the best products for them. For example, an online eyewear store could use AR to allow users to see how different eyewear styles would look on their faces, while AI analyzes which style best matches the user's face shape and style preferences. In an AR/VR environment, AI can collect user feedback and behavioral data in real-time and analyze it to optimize future marketing strategies. For example, if most users show more interest in a certain product area in a virtual store, AI can recommend devoting more marketing resources to those products. Through these innovative applications, AR and VR technologies combined with AI not only provide a unique user experience but also help organizations better understand and meet consumer needs, thus standing out in a competitive market. These technologies will therefore bring about a very significant change in Internet marketing in the future.

4.4. Ensuring Data Security and Consumer Trust

As Artificial Intelligence (AI) technologies are widely used in various fields, ethical and privacy issues will be of increasing concern.

Emerging technologies including cloud computing, self-driving cars, artificial intelligence, big data, machine learning, and cybersecurity show great potential for development in the modern technological era. However, the advancement of these technologies has also brought about ethical issues related to data security and privacy, which need to be addressed before these technologies can

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be widely deployed into production environments [11]. Particularly in the Internet marketing space, as consumers become more aware of personal data privacy, companies will be under increasing pressure to ensure transparency, fairness, and data protection in their use of AI technologies. Regulators are likely to introduce stricter regulations to govern the use of AI, ensuring that companies protect user privacy and prevent data misuse when collecting, processing, and using consumer data. At the same time, companies will need to take more proactive steps to build consumer trust, for example by implementing stronger data encryption, limiting access to sensitive data, and providing users with clearer instructions on how to use their data. As AI technology continues to advance, it is expected that new solutions will emerge to address these challenges, thereby improving business efficiency while also protecting individual privacy and upholding social and ethical standards.

5. Conclusion

Overall, the application of AI in Internet marketing is becoming increasingly widespread, and its impact should not be underestimated technology has already made personalized marketing more refined and effective through accurate data analysis and machine learning, significantly increasing consumer engagement and satisfaction. In addition, the application of AI in customer service, such as intelligent chatbots and virtual assistants, has dramatically improved the efficiency and quality of service, providing consumers with a seamless interactive experience twenty-four hours a day. These applications not only optimize marketing strategies but also enhance interactions between businesses and their customers.

However, the application of AI technology also raises several risks and ethical issues. Data privacy and security issues are among the most prominent challenges, especially when it comes to handling consumers' personal information. Businesses must ensure transparent and responsible data use to protect consumer privacy. In addition, algorithmic bias is a serious issue that can lead to unfair decision-making and discrimination. Therefore, ensuring the fairness and transparency of AI algorithms is an important task that businesses and developers must face.

Looking ahead, the use of AI in Internet marketing is expected to continue to grow and evolve. As technology advances, AI is seen to play a greater role in delivering more deeply personalized experiences, augmented and virtual reality integration, and automated content generation. Meanwhile, conversational AI and intelligent customer service will provide a more fluid and natural user communication experience through more advanced natural language processing techniques. However, as these technologies evolve, ethical and privacy protection concerns will also become more prominent, requiring companies, regulators, and technology developers to work together to develop and comply with stricter regulations and standards.

In short, AI is shaping the future of Internet marketing, presenting unprecedented opportunities for businesses. However, realizing the full potential of these technologies while ensuring ethical and social responsibility is a challenge that all stakeholders must face together. In this process, continuous innovation, responsible practices, and strict regulation will be key factors in ensuring the healthy development of AI technologies.

The results of this study can be an effective reference for marketing professionals and policymakers, as providing insights into how to effectively use AI technologies to optimize Internet marketing strategies while ensuring data security and algorithmic fairness. In addition, this paper is also important for regulators to help them develop more precise policies to address the ethical and privacy challenges posed by technological developments.

However, the objective limitation of this study is that it mainly relies on the current technology and market environment, and the rapid development of future technologies may bring new challenges and opportunities, which requires that future research should continuously follow the latest advances in AI technology and the effectiveness of its application in marketing. Future research can examine

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the practical application of AI in more diverse market environments, explore the marketing effectiveness of AI technology in different cultural and economic contexts, and further investigate how to maximize the marketing potential of the technology without sacrificing user privacy and security.

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Analysis of Marketing Strategies of Make-up Brands in Xiao Hong Shu in China

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Abstract: The pervasive influence of the Internet has profoundly shaped consumers' behaviors. The application Xiao Hong Shu has emerged as one of the most prominent social-commerce platforms among Chinese people where users share opinions and make purchases. Since 70% of the demographic of Xiao Hong Shu are females, the application appears to be the very place to go for make-up brands. This essay aims to analyze the marketing strategies of the brands from the perspectives of The Marketing Theory of 4Cs, which is customer, cost, convenience, and communication, enabling the brands to comprehensively identify the pros and cons of the brands' approaches and better adapt to the dynamic digital market. The essence of the marketing tactic of brands in Xiao Hong Shu lies in the findings. The user-generated reviews are greatly influencing customers' purchasing behaviors, so companies are paying KOLs and KOCs for positive promotion. E-commerce reduced the cost of setting up the physical store for business owners, and coupons released from the application lower the price of the product for customers. The social-commerce platform empowers a convenient transition between social media and e-commerce. However, challenges persist, for example business's payment did not gain the intended return, influencers spread inaccurate information to promote the products, and concerns over personal information security are vital.

Keywords: Xiao Hong Shu, users, brands, posts, strategy

1. Introduction

The changes taking place in modern societies, with the Internet taking the predominant position in people's daily lives, have thoroughly altered people's everyday lifestyles and habits. Reading through online resources, chatting with family members and friends with the help of communication applications, and working out by following exercise applications, electronic devices that help users achieve their goals are becoming an inseparable part of their daily lives. Starting in the 1990s, companies, including Amazon and Alibaba, have brought convenient and satisfying purchasing experiences to customers worldwide. More lucrative opportunities have been developed for e-commerce after the COVID-19 invasion where people are demanded to stay at home because the idea of less aggregation had a substantial impact on customers' behavior [1].

Besides many other companies that are well renowned, Xiao Hong Shu has innovated the shopping experience even more, bringing much satisfaction to customers and sales to businesses. First appearing as an application or website allowing users to edit and post the part of their daily life they

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want to share either several photos or videos, Xiao Hong Shu allows all the registered brands to promote their products in various kinds of ways. As the marketing strategies in modern society have developed to be much more diversified, different strategies have been adopted targeted at various locations and towards different customers. For example, companies owning their official account in Xiao Hong Shu advertise their product and the brand by adopting live streams by celebrities to recommend products to potential customers to impact customer conformity, by posting about the benefits of the brand's product daily on the official account on Xiao Hong Shu to inform the users of the products, and taking advantage of customers' trustworthy recommendations to attract their friends into the purchasing experience [2]. The effects of many of the unique marketing strategies chosen by brands in Xiao Hong Shu are the result of the application Xiao Hong Shu itself, consisting of the free talk platform where users can share their own opinions with others about anything they want, and the shops integrated within the Xiao Hong Shu which allow users to purchase by clicking onto the link after being recommended.

Understanding the strategies allows both the brand itself and other competitors to further improve. This essay aims to analyze the marketing strategies the brands, particularly brands in beauty industries, adopted to raise their brand awareness and to increase their sales, and how the application Xiao Hong Shu helped to achieve their goals. The essay demonstrates how the marketing strategies are adopted with the help of The Marketing Theory of 4Cs, customer, cost, convenience, and communication, explaining their advantages and then providing some suggestions on further improvement plans.

2. Xiao Hong Shu-- A Social-Commerce Application

Being intensively loved by people of all ages, especially young generations, Xiao Hong Shu has monthly active users of 300,000,000 by the start of year 2024. It is an application that started in 2013 as a platform for users to share outbound shopping experiences and provide more information on outbound shopping. Successfully breaking the bond between customers and sellers, Xiao Hong Shu is particularly cherished by young generations, namely people born after the 1980s and 1990s, especially women. Gradually, the users could freely integrate ideas about any products and post them on the platform, sharing viewpoints with other users. Therefore, Xiao Hong Shu evolved into a multifaceted social-commerce application with 70% of the demographics female.

The application leverages big data, artificial intelligence, and human resources to analyze the users' past views and searches to automatically provide users with similar posts that might appeal to them [3]. Not only can such programs bring more profit to the application by attracting users to watch more videos, but also suggest potential products or recommendation videos by top influencers to drag the users into purchasing experiences within the application.

As an application that is a combination of social media and e-commerce, any users could make posts about anything they are willing to share on the application, including but not limited to daily study strategies, travel guidance, sport sharing, and outfit references. Anyone can register for a personal account and get followers by posting attractive posts, and anyone over 18 years old can apply for an online store. There are platforms where users can communicate directly, and the platform exists for communication between buyers and sellers. Influencers play significant roles in propagating through personalized recommendations. Whether paid by brand or not, many accounts including that of celebrities are sharing information about products they find useful or interesting. If the official account are posting related information about the merchandise, there is often a link under the video or photo uploaded, a click on which can send the users directly to the brand's store and make a purchase. On the other hand, users can also wander around in Xiao Hong Shu stores and treat it like a usual online shopping application where users can directly place an order online.

All of those features have potentially made Xiao Hong Shu the place to go for youngsters.

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3. Understanding the Marketing Strategies with the Marketing Theory of 4Cs

3.1. The Aspect of Customer

From the perspectives of customers (the first C in 4Cs), Xiao Hong Shu indeed grabs the customers' attention. The demographics of users of Xiao Hong Shu are young females with high spending power, since among the 300,000,000 monthly active users, approximately 70% of them are female, over 80% of them are born after 1995, and half of the whole demographics are from the first and second-tier cities in China. These potential customers make beauty businesses especially popular in the application as females often have demands towards the beauty industries.

One of the most pronounced impacts on the purchasing trends of users in the application is the result of the social media platform where recommendations are prevalent. Many of the influencers, mega, medium, or micro, are posting videos sharing the make-ups they recently found catering to their needs or of good quality, and videos showing the steps of putting on make-ups. Since such topics are widely favored by users of the application, those posts often gain millions of views and thousands of likes. All of the potential respect and appreciation from the unknown users provide the influencers editing the posts more confidence to continue sharing information regarding make-up brands and beauty industries [4]. Therefore, as a social media, Xiao Hong Shu provides opportunities for the public to achieve higher levels of needs, which in turn accumulate individuals favoring the application.

Big data and artificial intelligence also contribute to the marketing success of Xiao Hong Shu. Automatically analyzing the users' past viewing and likes records as well as their past searches and posts enables the application to identify users' preferences and display the posts that might be appealing to the users [5]. Recommendation posts are also involved, potentially attracting users into making purchases in their related enthusiasm.

3.2. The Aspect of Cost

The second aspect of The Marketing Theory of 4Cs is Cost. The cost is a vital part to be taken into account when considering starting up a business. Opening an online store eliminates the need to rent a location for the store, furnish the exterior and interiors, and hire salespersons within the store, which saves thousands of dollars of fixed costs for the business [6]. In addition, as online shopping is the preferred way for the public nowadays, there is a trend that e-commerce is becoming increasingly thriving. Recommending the products accordingly to the engaged or potential customers, the people passionate about the product, can avoid many unnecessary attempts to sell the products to out-of-range customers, people unenthusiastic. Expanding the customer's range can be much simpler, try and recommend the posts to neutral customers and check if they click into or even like the post. Such a way is neither time-consuming nor costly, so many business owners tend to choose to open up an online store.

The cost for customers to get the merchandise is also reduced accordingly in Xiao Hong Shu. Vouchers and coupons show up randomly and can be used in particular stores in some conditions such as getting a discount of 10 yuan when buying items totaling 80 yuan. This coupon strategy enables the customers to purchase more, in this case buying up to 80 yuan, to get 10 yuan off, which also increases the sales for individual stores. Furthermore, discounts are available on shopping festivals such as June 18th and November 11th. The same strategy applies and the stores make more money.

3.3. The Aspect of Convenience

Convenience is one of the most crucial aspects both customers and business owners consider when making deals through the Internet. Besides the benefit of eliminating the need to go out and from the

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feedback the other customers provided, Xiao Hong Shu owns more advantages. As an application combining social media and e-commerce, Xiao Hong Shu allows users to go directly to the store after watching related videos recommending the appropriate product. When the users are watching the videos providing information regarding merchandise, often posted by the official account of the company, a link is often followed below the displayed video. If the individual wants to know further information, reading the comment section where people might leave personal opinions surrounding the product would help them understand more about a product, and clicking on the links followed could also send the customer to the store. In the store, the customer can check the price and make orders immediately, eliminating the need to search for products by switching to an application first.

There are often titles, descriptions, and keywords follow the videos and photos, smoothing the way for the users to find the related post when searching for it. For instance, a post from a make-up brand would add keywords such as “skin-whiten” and “not harsh”, so when the users are looking for products that can whiten their skin can target the brand without knowing the brand in the first place. The searches in the stores are also categorized by keywords, and the orders that show up are sorted by the store’s sales. More sales means suits better to the public’s taste, so the stores show in the up rows.

3.4. The Aspect of Communication

Communication between all users facilitates the promotion and is a key marketing strategy in Xiao Hong Shu. There are two ways the company can communicate with customers about commodities, direct and indirect. The direct way is through descriptions and contents in the official account of the company. Clicking into the account, beside the name and other profiles, the motto can best show the common goal or essence of a company or brand. For instance, a Chinese make-up brand called Guyu has its motto, “Plant-based whitening brand that suits more to the Chinese skin”. Only by reading the motto can the individual understand the brand--selling products that are organic and plant-based, and the desired effect is to whiten the skin. When scrolling down the page, its posts are visible in order sorted by uploading date. The updates can communicate with the engaged, potential, neutral, and even out-of-range customers about the product and the company. In the case of Guyu, the updates incorporate the details about a certain product, integrating the procedure to use it, its effect in the long run, statistics and facts, the profile of experts studying plant-based whitening, and their brand ambassadors promoting the brand.

Indirect communication also exists between buyers and sellers. Many brands are hiring brand ambassadors, KOLs (Key Opinion Leaders), or celebrities who would promote the product on his or her social media and invite more followers to try the merchandise [7]. However, KOC (Key Opinion Customer) is more likely to reach basic users. KOC are genuine customers of the brand who are willing to share their comments and viewpoints with their friends and families, and their reviews are often authentic personal experiences that have a more substantial effect on the actions of neutral customers because of the trustworthy nature of the opinions. Since Xiao Hong Shu is not only e-commerce but a social media where KOC can share experiences, it provides many benefits. The companies can monitor the KOC easily, viewers can communicate with the influencer in the comment section making it more interactive in nature, and users can be sent to the Xiao Hong Shu store and make a purchase immediately after reading the positive reviews regarding the brand. The communication process of brands in Xiao Hong Shu permits users to receive much more trustworthy and comprehensive information surrounding the brand and product. In other online shopping websites or applications, customers are often lured by the seller to leave positive comments with a few words and some photos next to them. Such superficial comments reduce the effect of attracting more customers because leaving the comments is not the intention of the customer, and they do it badly [8]. However, in Xiao Hong Shu users can receive views and likes after posting elaborately edited videos

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and polished word descriptions, and gain the confidence to make more reviews. This process with much autonomy can result in more genuine comments and an increase in sales.

Posting is not enough to make the brand well known, making lives can even expand the influence ranges. Looking for popular influencers to make a live show propagating the product and make real-life and real-time evaluations about the product could be even more trustful than posts that can be edited beforehand. Therefore, many brands would invite popular individuals to make lives in Xiao Hong Shu.

4. Problems and Suggestions

4.1. Ensured Secured Personal Information

With the growing number of customers registering for Xiao Hong Shu privacy security is direly needed. When numerous posts of daily life and promotion of products are exposed on social media, and when tons of commodities are been purchased online, privacy concerns are being raised. Therefore, Xiao Hong Shu needs to strengthen the platform management and make sure the personal information of every user is not inadvertently divulged to others [9].

4.2. Minimized Daily Stream Limitations

The money given to KOL and KOC might not reach the intended purpose due to the application. The daily stream of every account's posts would be controlled by Xiao Hong Shu's platform. Therefore, the money paid for promoting the product with the influencer's posts might not be viewed by the desired amount of people. Xiao Hong Shu should not limit the daily stream of the posts but try to equally display the videos and photos to people keen on them, so the money paid for the advertisement can receive the intended effect.

4.3. Improved Revision of Posts' Descriptions

Some Brands and influencers would add numerous popular but unrelated keywords in order to increase the number of people viewing the uploads. Adding keywords unrelated to the posted videos displays the post to more customers curious about the keywords because of the big data, but those users might not be intrigued by the videos. Such behaviors worsen the experience Xiao Hong Shu brings to users. Therefore, the platform should revise more comprehensively about the keywords and descriptions of the posts to provide users with the best experience.

4.4. Improved Revision of Posts' Contents

The communication between the users and the brand might be misleading. In order to increase sales, many brands' accounts would require the KOL and KOC to, post false information about the product's composition or its effects [4]. Hence, the users cannot distinguish the right fact from wrong which often leads to negative consequences where users purchase the make-up that does not suit their skin type. Thus, Xiao Hong Shu needs to strengthen its monitoring procedure and the brand itself needs to check the accuracy of the posts to ensure the reputation of the brand besides raising awareness [4].

4.5. Eliminated Redundant Posts

Moreover, some brands are over-posting the videos or photos. Some brands' accounts want to update their posts frequently to appeal to more customers and offer users a more full-rounded description and analysis of their products [10]. However, frequent reading of the post would lead to unintended effects such as becoming annoyed or bored with repeated exposure to the information. It is also time-wasting and energy-consuming for the individual managing the account to upload 3 or 4 posts a day. Thus, fewer and simplified posts would reach the best effect as the customers would not be annoyed and company staff would not be overloaded.

5. Conclusion

In conclusion, analyzing the strategies enables the application and the brands to comprehensively understand the strengths and weaknesses of their strategies, allowing them to judiciously adopt and refine particular measures. The process and result enable continuous improvement and adaptation of their approaches in response to evolving markets.

Several strategies have been adopted by make-up brands in the application named Xiao Hong Shu. Being e-commerce, the need for furnishing and managing the physical store is eliminated by managing the virtual store, which reduces the cost required to set up the store. As the application grew larger, coupons that could be used in particular stores were assigned to users, promoting the purchasing frequency and degree. The social-commerce platform enables corporations to advertise the brand and sell the product at the same time, offering convenient purchasing experiences to customers. Comprehensive reviews and feedback are equipped in Xiao Hong Shu with users taking the initiative to share their opinions about certain products, positive or negative, to gain acknowledgment from others through the same perspective and viewpoints. The likes and views are the most potent evidence to the degree others agree with their perspectives, which further prompts the users to share their authentic ideas regarding the products or brands. Since the influencer-follower relationship has gradually involved friendships in which mutual trust dominates, all of the reviews could serve as the most effective promotions for the product and brand if they are all positive. Therefore, companies hire KOLs and KOCs to largely post favorable comments surrounding the product to convince out-of-range and neutral customers to purchase. On the other hand, problems exist in the market. Information security is at risk as the user number grows larger. Inaccurate descriptions and keywords deceive the public into believing misinformation, leading to making uniform decisions based on misleading content. Redundant posts annoy the viewer and decrease the brand's sales. Limiting the daily stream of the influencer affects the brand as the money paid to attract more customers cannot reach the intended purpose. The analysis might contain bias and lack sufficient objectivity, which jeopardizes the integrity of the findings. In the future, a broader scope and more comprehensive application of the findings are essential to enhance the validity of the research outcome.

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Consumer Anxiety in the Digital Age: Analyzing the Impact of Information Overload on Decision-Making

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Abstract: In the digital age, information overload is becoming increasingly prevalent, resulting in consumers facing great challenges in the decision-making process. This study aims to analyze the impact of information overload on consumer anxiety and decision-making difficulties. Netflix and Twitter were selected as case studies to demonstrate successful and failed information management strategies. It was found that Netflix effectively reduced information overload and increased user satisfaction and loyalty through its personalized recommendation system. On the other hand, Twitter deteriorated user experience and increased decision fatigue due to its failure to effectively manage information flow. Based on this, this study proposes that marketers adopt personalized content, trust-building, optimized information filtering mechanisms and continuous improvement strategies to address the challenges of information overload. This study concludes that understanding and managing information overload is critical to digital marketing. Organizations can improve marketing strategies by providing more efficient and user-friendly experiences that enhance user engagement and satisfaction.

Keywords: Information overload, Digital marketing, Consumer behavior

1. Introduction

The digital age has revolutionized the marketing landscape, transforming how businesses engage with consumers. With the proliferation of digital marketing channels, consumers are now inundated with constant information from various sources, from social media and email to targeted advertisements and search engine results. This digital deluge offers unprecedented access to information and has led to information overload. Information overload occurs when the amount of input to a system exceeds its processing capacity, causing individuals to struggle with absorbing and making sense of the vast amount of data they encounter daily. This essay aims to analyze the sources of consumer anxiety in the digital age, focusing particularly on information overload and its subsequent impact on decision-making difficulties.

The primary objective of this essay is to delve into the intricate dynamics of information overload from a marketing perspective. By examining the relationship between the overwhelming volume of digital information and consumer anxiety, it can better understand modern consumers' challenges. This analysis is crucial for marketers who must develop effective strategies that capture consumer attention and aid in dec. Understanding how information overload affects consumers can lead to the

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creation of more streamlined, user-friendly marketing approaches that alleviate anxiety rather than exacerbate it.

The importance of addressing information overload in the context of digital marketing cannot be overstated. As the digital landscape continues to evolve, the sheer volume of content available to consumers will only increase. With a clear understanding of how to manage and mitigate the effects of this overload, marketers can avoid alienating their audience, leading to decreased engagement, trust, and, ultimately, sales. By exploring this topic, this study aims to provide insights that will help marketers craft effective strategies that capture attention and foster a positive and less stressful consumer experience.

This study thoroughly examines information overload. It starts by defining information overload and exploring consumer decision-making theories in digital marketing. Case analyses illustrate the impacts of marketing strategies on consumer overload, like Netflix's success and Twitter's challenges. In the discussion, findings are linked to practical advice for marketers. The conclusion summarizes key points, stresses implications for marketing practices, and suggests adjustments for the digital age, aiming to offer actionable insights for consumer well-being.

2. Literature Review

2.1. Information Overload

Information overload is a concept that has garnered significant attention in the digital age, particularly within the realm of marketing. It is defined as the state in which the amount of information available to an individual exceeds their ability to process it effectively. This phenomenon can lead to feelings of anxiety, confusion, and indecision as consumers struggle to filter through vast amounts of data to find what is relevant and useful. In digital marketing, information overload is especially pertinent due to online content dissemination's pervasive and continuous nature. The rapid growth of digital platforms and the advent of targeted advertising have intensified the flow of information, making it increasingly difficult for consumers to navigate through the noise.

To understand how information overload affects consumers, exploring the theories related to consumer decision-making, including Consumer Decision-Making Theories and Herbert Simon's theory of bounded rationality, is essential. One prominent theory is the Elaboration Likelihood Model (ELM), which posits that individuals process information through two main routes: the central and peripheral routes [1]. The central route involves careful and thoughtful consideration of the information. In contrast, the peripheral route relies on superficial cues such as the source's attractiveness or the message's emotional appeal. Consumers are more likely to resort to the peripheral route in environments with high information load as their cognitive resources are strained.

Herbert Simon's theory of bounded rationality suggests that individuals' decision-making capabilities are limited by their information, cognitive limitations, and the finite amount of time they have to make a decision [2]. This theory highlights that in situations of information overload, consumers may experience decision fatigue, leading to suboptimal choices or even decision avoidance.

2.2. Impact of Digital Marketing on Information Flow

Digital marketing strategies have significantly increased the volume and complexity of information consumers encounter [3]. Techniques such as personalized advertising, retargeting, and content marketing are designed to capture consumer attention and drive engagement. However, these strategies also contribute to the overwhelming amount of information consumers must process. For instance, personalized ads leverage data analytics to present tailored messages to consumers based on

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browsing history and preferences. While this can enhance relevance, it also means that consumers are constantly bombarded with messages that vie for their attention.

Social media platforms exacerbate this issue by facilitating rapid and continuous content updates. Algorithms prioritize content based on engagement metrics, leading to a flood of information that can quickly overwhelm users. The paradox of choice, a concept introduced by Barry Schwartz, is also relevant here [4]. It suggests that an abundance of options can lead to increased anxiety and dissatisfaction as consumers fear making the wrong choice among many alternatives.

The theories discussed are applied in various real-world marketing strategies to mitigate or exacerbate information overload. For example, recommendation systems, as seen in platforms like Netflix, apply the principles of bounded rationality by simplifying decision-making processes. These systems analyze user behavior to suggest content likely to be of interest, thus reducing the cognitive load on consumers and enhancing their experience.

Conversely, the ELM is evident in the design of many digital ads that rely on emotional appeals and superficial cues to influence consumer behavior. When consumers are overwhelmed with information, these peripheral cues become more influential as individuals cannot engage in deep rational processing of the information presented.

3. Case Study

3.1. Positive Case: Netflix's Personalized Recommendation System

Netflix’s personalized recommendation system exemplifies the successful management of information overload. The platform utilizes sophisticated algorithms that analyze users’ viewing history, ratings, and behavioral patterns to suggest new content. This personalized approach helps users navigate an extensive library of videos, reducing search time and enhancing user satisfaction. The recommendation system is built on machine learning techniques that continually refine suggestions based on user interactions, creating a dynamic and responsive user experience.

Netflix’s strategy effectively addresses the issue of information overload by streamlining the decision-making process [5]. By presenting users with curated content, Netflix minimizes the cognitive load required to sift through vast data. This approach increases user satisfaction and boosts retention rates and user engagement. Users feel more in control and less overwhelmed, making the platform more appealing and user-friendly.

In practice, Netflix’s recommendation system illustrates how well-implemented digital marketing strategies can turn the challenge of information overload into an opportunity [6]. By simplifying the user’s choice architecture, Netflix demonstrates the practical application of theories like bounded rationality and ELM. The platform’s focus on reducing cognitive load aligns with the principles of these theories, showing how digital tools can enhance consumer decision-making processes.

Moreover, Netflix’s ability to continually learn from user behavior and adjust recommendations ensures that the platform remains relevant to users’ evolving preferences. This dynamic adjustment capability improves user experience and keeps the platform competitive in a rapidly changing digital landscape. The success of Netflix's recommendation system highlights the importance of personalization and continuous improvement in managing information overload.

3.2. Negative Case: Information Overload on Twitter

In contrast, Twitter presents a negative case where information overload could be more effectively managed. Despite efforts to optimize content display through algorithms, the platform’s rapid update pace and sheer volume of information often overwhelm users. Twitter’s algorithm prioritizes content based on engagement metrics, which can result in an overwhelming and chaotic feed for users.

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This environment can lead to decision fatigue, where users become mentally exhausted from processing too much information [7]. The constant influx of tweets makes finding relevant and valuable information challenging, declining user engagement and satisfaction. Users may experience increased anxiety and stress, detracting from their overall experience on the platform.

Twitter's case highlights the pitfalls of insufficiently managed information overload. Unlike Netflix, Twitter's approach does not adequately filter or personalize content to reduce cognitive strain. This gap underscores the importance of implementing effective information management strategies to maintain user engagement and satisfaction.

The platform's inability to effectively manage information overload has broader implications for its business model [8]. Users who feel overwhelmed and stressed are less likely to engage with the platform regularly, potentially leading to decreased advertising revenue and user retention. This highlights a critical area for improvement for social media platforms aiming to enhance user experience.

3.3. Consumer Psychology under Information Overload

Understanding consumer psychology is crucial when examining the impact of information overload [9]. This section delves into case studies to analyze how information overload affects consumer emotions, trust, and decision fatigue.

3.3.1. Netflix's Positive Impact on Consumer Psychology

Netflix's personalized recommendation system positively influences consumer psychology by reducing decision fatigue and enhancing user trust. When users feel that the platform understands their preferences and consistently offers relevant content, it fosters a sense of reliability and satisfaction. This trust encourages continued use and loyalty to the platform.

Moreover, reducing decision fatigue allows users to enjoy their viewing experience without the stress of sifting through irrelevant content. The personalized approach also caters to users' emotional needs, providing a tailored experience that feels considerate and engaging. This emotional connection further strengthens user loyalty and platform retention rates.

Netflix also benefits from user feedback loops, where the system learns from users' interactions and continuously improves recommendations [10]. This dynamic interaction personalizes the experience and makes users feel that their preferences are valued and understood. The emotional bond created through this process is crucial for maintaining long-term user satisfaction and loyalty.

3.3.2. Twitter's Negative Impact on Consumer Psychology

Twitter's failure to manage information overload effectively can erode user trust and increase decision fatigue. The platform's chaotic feed often overwhelms and stresses users, leading to negative emotions associated with their user experience. This emotional strain can result in reduced platform engagement and increased user churn.

The constant bombardment of information on Twitter can also diminish user trust. When users are consistently exposed to irrelevant or overwhelming content, they may question the platform's ability to provide valuable information. This erosion of trust can further impact user satisfaction and engagement, highlighting the detrimental effects of poorly managed information overload.

The negative emotional impact on users includes feelings of frustration and helplessness when trying to navigate the platform. The lack of effective filtering mechanisms means that users must expend significant effort to find content that matters to them, which can lead to a sense of futility and dissatisfaction. These negative experiences underscore the importance of implementing user-centric design principles in digital marketing strategies to mitigate the effects of information overload.

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Based on these analyses, several practical implications for marketers can be drawn. Personalization and effective content filtering are paramount in managing information overload and enhancing user experience. Marketers should leverage data analytics and machine learning to create personalized content experiences that reduce cognitive load and increase satisfaction. Building and maintaining trust is another critical aspect. Consistently delivering high-quality, relevant content helps build trust, fostering long-term engagement and loyalty. Transparent data practices and giving users control over their data can further enhance trust and satisfaction.

Additionally, continuous improvement and adaptation are essential. Marketers must stay responsive to changing user preferences and behaviors, refining their strategies and algorithms accordingly. Investing in ongoing research and development can help maintain relevance and effectiveness. Addressing the emotional impact of information overload is also important. Marketers can create more engaging and satisfying interactions by designing user experiences that reduce anxiety and foster positive emotional connections. Educating users on managing information overload can empower them and improve their overall experience.

4. Discussion

4.1. Synthesis of Findings

The analysis of Netflix and Twitter provides a comprehensive understanding of how information overload affects consumer behavior and the effectiveness of marketing strategies. Netflix's personalized recommendation system exemplifies the benefits of effectively managing information overload. By employing sophisticated algorithms, Netflix reduces the cognitive load on users, enhancing their experience and increasing platform engagement and retention. This positive case demonstrates that when information is curated and personalized, it leads to a more satisfying and less stressful user experience, promoting sustained usage and loyalty.

Conversely, Twitter's failure to manage information overload exemplifies the negative impacts on consumer behavior [11]. The platform's rapid information flow and lack of effective filtering mechanisms overwhelm users, leading to decision fatigue, anxiety, and decreased engagement. This negative case highlights that when information is not appropriately managed, it can result in user dissatisfaction and reduced platform usage.

These findings suggest that managing information overload is critical in digital marketing. Effective strategies can enhance user experience and engagement, while poor management can lead to adverse outcomes, including increased consumer anxiety and decreased trust and engagement.

4.2. Implications for Marketers

Marketers can draw several key lessons from these cases. First, the importance of personalized content must be considered. Netflix's success in managing information overload through personalized recommendations underscores the value of tailoring content to individual user preferences [12]. Marketers should invest in data analytics and machine learning technologies to create personalized experiences that reduce cognitive load and enhance user satisfaction.

Second, building trust is crucial. Users are more likely to engage with a platform they trust to provide relevant and valuable information. Marketers should deliver consistent, high-quality content that meets user needs and expectations. This approach can foster trust and long-term engagement.

Third, effective information filtering mechanisms are needed [13]. Twitter's challenges highlight the risks of overwhelming users with too much information. Marketers should implement strategies that filter and prioritize content, ensuring users are presented with the most relevant information first. This approach can help reduce decision fatigue and enhance user satisfaction.

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Moreover, marketers should recognize the importance of continuous improvement and adaptation. User preferences and behaviors constantly evolve, and marketing strategies must adapt. Investing in ongoing research and development can help marketers refine their algorithms and strategies, ensuring they remain responsive to user needs.

Additionally, marketers should consider the emotional impact of information overload [14]. The negative emotions associated with overwhelming information can significantly affect user engagement and satisfaction. By creating a more manageable and enjoyable user experience, marketers can reduce anxiety and foster a more positive emotional connection with their audience.

Furthermore, the success of Netflix's recommendation system also suggests that transparency and user control are important. Allowing users to understand and influence how their data is used for personalization can increase trust and satisfaction. Marketers should ensure that personalization efforts are transparent and provide users with control over their data and content preferences.

4.3. Link between Theory and Practice

The theoretical frameworks introduced in the literature review, such as the ELM and bounded rationality, provide valuable insights into the practical strategies employed by Netflix and Twitter. Netflix’s approach aligns with the ELM by utilizing peripheral cues and reducing cognitive strain. The platform’s use of personalized recommendations based on user behavior reflects the principles of bounded rationality, simplifying the decision-making process and enhancing user experience.

On the other hand, Twitter’s shortcomings highlight the importance of these theoretical concepts in managing information overload. The platform’s failure to effectively filter and prioritize content results in increased cognitive load and decision fatigue, demonstrating the practical challenges of applying these theories.

These cases illustrate that the theories of consumer decision-making are not merely academic concepts but have real-world applications that can significantly impact business outcomes. By understanding and applying these theories, marketers can design more effective strategies that enhance user experience and drive engagement.

Additionally, Netflix's successful application of these theories underscores the importance of user-centric design in managing information overload. By prioritizing the user’s cognitive and emotional needs, marketers can create more engaging and satisfying experiences. This user-centric approach is essential for building long-term relationships and fostering brand loyalty.

4.4. Practical Recommendations for Marketers

Marketers should consider several practical recommendations based on synthesizing findings and theoretical applications. First, invest in personalization by utilizing data analytics and machine learning to create tailored content experiences, significantly reducing cognitive load and enhancing user satisfaction. Additionally, enhancing content filtering mechanisms to prioritize relevant information helps users navigate vast amounts of data more easily and reduces decision fatigue. Building and maintaining trust by delivering consistent, high-quality content is crucial for long-term engagement and loyalty. Marketers should also focus on continuous improvement by investing in ongoing research and development to refine algorithms and strategies and staying responsive to changing user preferences and behaviors. Addressing the emotional impact of information overload by designing user experiences that reduce anxiety and foster positive emotional connections is essential. Leveraging theoretical insights from the Elaboration Likelihood Model and bounded rationality can simplify decision-making and enhance user engagement. Promoting transparency and user control in personalization efforts enhances trust and satisfaction while implementing feedback loops, which ensures that personalization and filtering algorithms remain relevant and responsive to

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user needs. Prioritizing user experience by designing strategies that reduce cognitive load and address emotional needs can create more engaging and satisfying interactions. Finally, educating users on managing information overload and best practices for navigating digital content can empower them and improve their overall experience.

5. Conclusion

In conclusion, this analysis has highlighted the critical importance of managing information overload in the digital age. Through the examination of Netflix and Twitter, it is evident that effective information management strategies can significantly enhance user experience and engagement. Netflix's success with personalized recommendations showcases the value of leveraging data analytics and machine learning to reduce cognitive load and foster user satisfaction. In contrast, Twitter's challenges illustrate the negative impacts of poorly managed information flow, leading to decision fatigue and decreased user trust.

Understanding and addressing information overload is essential for developing effective marketing strategies. Future marketing practices should integrate these insights to create more engaging and satisfying user experiences. As digital environments evolve, managing information overload will remain a key differentiator in the competitive landscape. By aligning marketing strategies with the principles of consumer psychology and decision-making theories, businesses can foster long-term user loyalty and drive sustainable success. Moreover, transparency and user control in data usage are important. Ensuring that users understand and can influence how their data is used for personalization can significantly enhance trust and satisfaction. Continuous improvement and adaptation, supported by ongoing research and development, will be essential in staying responsive to changing user preferences and behaviors.

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Innovative Digital Marketing Strategies in the Gaming Industry: A Case Study of Love and Deep Space

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Abstract: By analyzing the digital marketing strategies for the game Love and Deep Space by Paper Stacking Company, this study reveals the company's diverse and innovative methods in the global market. Firstly, by highly integrating with local cultures, Paper Stacking Company successfully promoted Love and Deep Space in overseas markets, increasing user numbers and brand recognition. Secondly, the combined online and offline marketing strategies significantly enhanced the game's visibility and user engagement. Additionally, the realistic 3D style, personalized character design, and rich interactive gameplay brought unique appeal and user experience to the game. Through cross-border cooperation with the fitness app Keep, the game was linked with a healthy lifestyle, further boosting its brand image and attracting potential users. Overall, these digital marketing strategies successfully promoted Love and Deep Space and helped Paper Stacking Company maintain its competitiveness and brand value in a highly competitive market. In the future, with the continuous development of digital technology, these advantages will continue to bring more market opportunities and success to Love and Deep Space.

Keywords: Digital Marketing, Gaming Industry, Cross-border Cooperation, 3D Realistic Style

1. Introduction

Digital marketing has greatly impacted the game industry [1, 2]. Consumers can learn more interesting games by browsing and clicking on web pages. With the development of digital technology, Paper Stacking Company has innovated and launched an interactive love game, Love and Deep Space. Through diversified digital marketing methods, the production team has obtained many consumer bases and stood out from many games simultaneously, successfully making them out of the circle.

With the rapid development of the Internet and social media, the traditional marketing model has made it difficult to meet brand promotion needs [3, 4]. Integrating big data, artificial intelligence, and various aspects of marketing is becoming increasingly profound [5]. At the same time, the deep integration of cutting-edge technologies such as 5G, AR, and VR with the gaming industry provides new pathways for corporate brand marketing [6]. As an emerging marketing method, digital marketing realizes the rapid dissemination of brand information through digital platforms such as the Internet and mobile devices, and user interactive game companies adopt this innovative means to narrow the distance with consumers, accurately locate target customers and improve exposure to get

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more profits [7]. For example, Love and Deep Space cooperates with Vision Pro to improve customer experience and satisfaction by using AR technology so that the game has its characteristics and shows the unique advantages of Love and Deep Space.

To further attract customer groups, Love and Deep Space uses a variety of marketing activities. This article will explore the impact of digital technology on love and deep space marketing strategies and focus on analyzing its specific strategic means—for example, co-brand promotion. Through cooperation with Sanchuang Store in Taipei, Taiwan, customers get an exquisite linkage limited peripheral for every drink they buy, enhancing their participation. Love and Deep Space has successfully utilized Taiwanese coffee's huge user base and offline store resources. During the event, the daily table reservation is in short supply, and the surrounding prices are linked, so Love and Deep Space can gain more popularity.

2. Case Description

The paper folding game was born from the founder Yao Runhao's study abroad experience in Japan. During his postgraduate study at Waseda University in 2012, Yao Runhao and several like-minded friends developed and created Warm Dress-up Story [8]. Founded in 2015, Paper Stac King Company is a company focusing on the design and production of games. Several software engineers founded it. They have a strong interest in game research and development and hope to bring infinite fun to play Ers, bring game art into people's lives, and make amazing breakthroughs in women's games. The team members of Paper Fold Games have rich game development experience and creative ability. They constantly explore new gameplay and design concepts to bring players a new game experience. The Company's products are rich, including many games, puzzles, simulations and other games they make. They usually have a unique style, simple pictures, and perfect operation modes suitable for R multi-age players. The paper folding company pays attention to the user's experience and interaction, collects S from the players' experience, and continuously optimizes, improves, and proposes novel functions. In addition to developing games, the paper folding company also participates in several game communities and industry activities, maintains communication with other developers and others, and promotes the development of the game industry together. Their goal is to provide happiness and new experiences for players worldwide through innovative VR content and high-quality game products. The paper-folding game company's success lies in its high-quality products and its corporate culture and values. First of all, the team of the paper folding company is full of passion and rich creativity in the game's development. They constantly pursue perfection and do not challenge their limits. The boundaries of the game's development and the company's team drum encourage the development of innovative ideas and provide an excellent development environment and support. Secondly, the company puts the user experience first, constantly listens to the opinions and suggestions of users, adjusts according to the market's needs, and establishes a good relationship with users. In addition, the company also advocates for a spirit of teamwork. Each developer has its own space to develop high-quality game products and jointly achieve their goals. Finally, as a responsible company, the company actively participates in community activities and pays attention to environmental protection and public welfare. In the future, Paper Fold Games will continue to adhere to the spirit of innovation and user-oriented concepts and launch new game products to provide more fun for players worldwide. They will continue to work closely with the game community and industry partners to promote the development and progress of the game industry.

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3. Marketing Strategy Analysis

When promoting its Love and Deep Space game, Paper Folding Company has adopted many innovative and diversified marketing strategies to enhance its influence and user base. The following is an analysis of these strategies through digital marketing.

3.1. Tailored Strategies for Overseas Market Launches

For overseas marketing, to prevent misunderstandings and negative reactions caused by cultural differences, the paper folding company has carefully localized translation and cultural customs so that players can better adapt to the game and increase the number and recognition of users. For example, the team changed the character clothing and design in the Middle East market to fit the local culture. The paper folding company also links with local popular cultural symbols, such as launching a co-branded version with local animation characters in the Japanese market to attract customer groups. This targeted activity has effectively improved paper folding companies' brand awareness and market share worldwide.

3.2. Integrated Online and Offline Marketing Strategies

The paper folding company adopts a marketing strategy that combines online and offline. Online, the company delivers customized advertising content through major social media platforms and game forums, such as the role trailer of the three male protagonists, the game experience sharing of internal test activity players and many short video advertisements. The MV of the theme song of the same name, affectionately interpreted by Sarah Brightman, has received millions of hits on Bilibili (B station) alone [9]. The push of these contents has aroused the interest and discussion of many potential players. Online and offline, paper stacking companies have placed creative billboard advertisements in shopping malls and busy streets in many major cities worldwide. For example, on Shanghai University Street, the punch-in activity starts at the subway entrance. These billboards show the exquisite images of the hero of the game. And directly guide the audience in downloading the game or participating in online activities through a QR code. This online and offline promotion strategy greatly enhances the brand's visibility and users' participation.

3.3. 3D Realistic Style

The paper folding company adopts a realistic 3D style to create game characters, the first in China, attracting many customer groups. The visual difference allows players to distinguish between love and deep space from other games, promote more eye-catching and uniqueness, and create memory points for potential customers. This visual style makes the game scene and characters more realistic and immersive and greatly improves the player’s immersion. For marketing, the company places special emphasis on this point, conveying a unique game experience to players by displaying high-resolution scenes and meticulous character design in the game. In addition, the paper folding company also uses this 3D realistic style to cooperate with Vision Pro to give players an immersive feeling and attract the attention of industry insiders and potential investors. This strategy not only improves the market performance of the game but also reflects the team’s innovative ideas.

3.4. Customize the Player’s Image and Change Clothes

The custom function is a core gameplay in Love and Deep Space. Paper Stacking Company uses this function to enhance the player's personalized experience and creative expression. Players can pinch their faces and change their hairstyles and clothes. This highly personalized setting allows players to project their identity in the game world. It promotes their desire to share because they can display and

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share their unique creations in the game and send them to social media. Paper folding companies use this in marketing to attract potential groups and stabilize existing players through social media, such as sharing and punching activities in Little Red Book. This not only increases the game's attractiveness but also stimulates the desire of potential players to participate.

3.5. Action gameplay

The paper folding company adds action elements to love and deep space, attracting players who like fast-paced and skillful challenges. A cosmic monster called Wanderer is added to the game. Players need to defeat it through attribute combinations and skills at the chapter level. The paper folding team added challenge scenes to the publicity trailer to highlight this feature, including stunt display and battle details. Promoting this gameplay not only improves the dynamic sense of the game but also attracts a wide range of players, including those who may need to pay more attention to traditional role-playing or dress-up games. By emphasizing the interaction and skill requirements in the game, the paper folding company has successfully expanded its target market.

3.6. Co-branded with Keep

The paper folding company has successfully linked Love and Deep Space with a healthy and energetic lifestyle through co-branded cooperation with the fitness application Keep. This strategic cooperation not only improves the brand image of the game but also promotes the game to non-traditional game players, especially young people who pay attention to a healthy life. Co-branded activities include joint fitness challenges, interactive courses and healthy lifestyle promotion activities on official social media. These activities not only deepen the player’s recognition of the game content but also effectively expand the influence and participation of their social media. In addition, Paper Stacking Company uses Keep’s user base for cross-promotion and directly pushes game advertisements and trial invitations to potential users through Keep’s application and communication platform. This cooperation improves the number of game downloads and active users and brings valuable user feedback to the company to help further optimize the game experience.

3.7. Krypton Price Reduction

The Krypton price reduction strategy implemented in Love and Deep Space is important for paper stacking companies to stimulate consumption and increase player stickiness. By regularly providing discounts on goods and services in the game, the company can stimulate players’ desire to buy and maintain the vitality of the game’s economic system. This strategy is especially implemented during large-scale updates or festivals to maximize influence and player participation. To further promote this strategy, the paper folding company also vigorously promoted it through pop-up ads and updated logs in social media and games. This not only reminds players of discount information but also encourages them to share it, thus attracting new players to join and old players to return. Implementing these marketing strategies proves the diversity and adaptability of paper folding companies’ strategies in the global game market. Through the comprehensive use of traditional and modern marketing tools, the company has successfully promoted the game Love and Deep Space and maintained its competitiveness and brand value in the continuous market competition.

3.8. The Image Design of the Male Protagonist with a Distinct Personality

Regarding character design, the paper folding company specializes in creating a male protagonist with a distinct personality. The character modeling of Love and Deep Space requires high requirements for skin texture, facial features, bone shape and other details. To solve these problems,

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we have collected a lot of materials to learn. The reporter learned that the production team established a database through face-to-face capture, dynamic capture, 3D scanning and other technical means and introduced [10]. Each hero has a unique background story and personality and has their own visual style and behavior pattern, allowing players to choose to interact with it according to their preferences. This in-depth character-building strategy greatly enhances the story and emotional investment of the game, enabling players to experience richer emotional fluctuations and character development. By setting unique male protagonists, the paper folding company can attract different types of players into the game world, increasing the participation of players and interactivity. In addition, a distinct character personality is conducive to marketing communication on social media. Players often share their favorite characters and game plots in discussion areas and social platforms, which naturally forms effective word-of-mouth marketing.

3.9. Data analysis

On March 5, Quest Mobile released the 2024 “Her Economy” Insight Report, pointing out that the proportion of female users on the mobile Internet has gradually increased. As of January 2024, the number of active female users on the whole network has increased to nearly 610 million. In the women’s consumption section, the Report also introduced the top 5 typical women’s monthly activities in January, in which the folded paper Love and Deep Space led the female game track with an absolute advantage of 6.781 million MAU. According to GameLook’s estimate, Love and Deep Space is estimated to have a flow of about 600 million in the first month, and its emergence will undoubtedly reshape the women’s track [11]. This way, Love and Deep Space has achieved leading results in women’s games.

4. Suggestions

Love and Deep Space is a popular female-oriented game launched by Paper Stacking Company. It has won the love of most players with its exquisite pictures, fascinating plots and rich interactive elements. The game's success is due to its accurate market positioning, innovative game design and diversified digital marketing strategies. The learning suggestions that can be obtained through the above analysis include.

Social media marketing. The paper folding company uses social media platforms such as Weibo, WeChat, and TikTok to promote its products. Publishing game-related news, trailers, production tidbits, and interaction with players has greatly improved the exposure and topic of the game. In particular, the cooperation with well-known KOLs (opinion leaders) has attracted many potential users with the help of their influence for accurate marketing.

Brand co-branding and cross-border cooperation. The co-branded activities of Love and Deep Space and Taiwan Cafe are a highlight of their digital marketing. Through cooperation with young people's favorite brands, the paper folding company not only improves the brand image of the game but also increases the user’s sense of participation and belonging through co-branded products and activities. This cross-border cooperation has effectively expanded the influence of the game and attracted more users in the non-game circle.

Data-driven accurate marketing. The paper folding company formulates a more accurate marketing strategy by analyzing player behavior data. The user's activity and paid conversion rate are improved by analyzing players' game habits and consumption behaviors and making personalized recommendations and push. Data analysis also helps companies find and solve user feedback problems promptly and improve user satisfaction and loyalty.

Multi-channel promotion. In addition to traditional social media and brand cooperation, the paper folding company promotes it through various channels. For example, cooperate with major app stores for joint promotion to increase the number of game downloads and users through in-app advertisements, special activities, etc. At the same time, search engine optimization and marketing should be used to improve the exposure of games in search engines and attract more potential users.

Love and Deep Space has successfully improved the game's market influence and user stickiness through diversified digital marketing strategies. Social media marketing, brand co-branding and cross-border cooperation, data-driven accurate marketing, multi-channel promotion, and creative content and interactive experience constitute the core advantages of its digital marketing. These strategies help Love, and Deep Space stand out from the game market among highly competitive women and set a benchmark position for paper folding companies in digital marketing. In the future, with the continuous development of digital technology, these advantages will continue to bring more market opportunities and success to Love and Deep Space.

5. Conclusion

Through an in-depth analysis of the digital marketing strategies for the game Love and Deep Space, one can see the diverse and innovative methods used by Paper Stacking Company in promoting the game. Firstly, by highly integrating with local cultures, Paper Stacking Company successfully promoted Love and Deep Space in overseas markets, increasing user numbers and brand recognition. Secondly, the combined online and offline marketing strategies significantly enhanced the game's visibility and user engagement. Additionally, the 3D realistic style, personalized character design, and rich interactive gameplay brought unique appeal and user experience to the game. The cross-border cooperation with the fitness app Keep linked the game with a healthy lifestyle, boosting its brand image and attracting potential users. Overall, these diverse digital marketing strategies successfully promoted Love and Deep Space and helped Paper Stacking Company maintain its competitiveness and brand value in a highly competitive market. In the future, with the continuous development of digital technology, these advantages will bring more market opportunities and success to Love and Deep Space.

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Optimizing Social Media for Marketing and Customer Relationship Management: A Case Study of Nike

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Abstract: Social media has become a core tool for brand marketing and customer relationship management in the digital age. It has changed how brands interact with their audience, providing opportunities for direct interaction and real-time feedback. This study explores the specific roles of social media platforms in enhancing brand-customer interaction, content innovation, and data analysis. It analyzes how optimizing social media strategies can increase customer engagement and loyalty. By analyzing customer interaction data, brands can better understand customer behavior and preferences to customize personalized and relevant content, enhancing customer engagement and loyalty. Brands also need to prioritize privacy and security to ensure transparency in data collection and usage and strict compliance with regulations. Combining content innovation with real-time interaction enhances customer satisfaction and brand image. The case study of Nike's social media strategy demonstrates successful practices in utilizing interactivity, content innovation, and data analysis, providing valuable management insights to help brands maintain competitive advantages and achieve sustainable development in a fiercely competitive market.

Keywords: Social Media Marketing, Customer Engagement, Content Innovation, Data Analytics

1. Introduction

In the digital age, social media has become an integral part of modern marketing strategies. With the number of internet users growing rapidly, companies utilizing social media platforms to promote their products and services can reach a wider audience and interact with consumers in ways never before possible. The importance of social media is reflected not only in the breadth of its reach but also in the two-way communication opportunities it provides, enabling brands to receive real-time feedback and quickly adjust their marketing strategies.

As the popularity of social media grows, so does its role in branding. Brands can use these platforms to increase awareness and build and maintain long-term relationships with their customers through constant interaction and accurate content marketing. The cost-effectiveness and targeting precision of social media marketing make it a strategic resource to which brands must pay attention.

This study aims to explore the specific role of different social media platforms in marketing and analyze how brands can effectively use these platforms to build relationships with consumers. The research questions focus on how effective the major social platforms are in marketing? How can brands optimize customer relationship management through social media strategies? By exploring

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these questions, this paper will provide an in-depth analysis of the effectiveness of social media marketing strategies, aiming to show readers a panoramic view of how brands utilize social media for marketing.

2. Harnessing Social Media for Enhanced Customer Engagement

Social media offers a unique platform that allows brands to connect with their customers in ways never before possible. First and foremost, the interactive nature of social media is one of its greatest strengths. Brands can interact with their customers in real-time by posting content that sparks discussion, responding to customer comments, and participating in or initiating conversational activities on social media. This direct interaction not only increases customer engagement but also increases brand awareness and appeal [1].

Content innovation is also key to building successful customer relationships on social media. Innovative content can be high-quality educational articles, engaging videos, or motivational content that aligns with brand values. For example, some brands deepen their emotional connection with customers by creating humorous or touching videos that resonate and are widely reposted. Through this content, brands showcase their products and communicate their culture and philosophy [2].

In addition, the social mediaization of customer service greatly increases customer satisfaction and loyalty. Brands can utilize social media tools such as instant messaging, comment replies, and dedicated customer service pages to respond to customer inquiries and questions quickly. This instant feedback mechanism not only meets customers' immediate needs but also demonstrates the importance brands place on the customer experience.

Data analytics plays a crucial role in this process. By analyzing customer interaction data, brands can better understand customer behavior and preferences to optimize their social media strategy [3]. Data analytics helps brands monitor the performance of various content, evaluate the effectiveness of marketing campaigns, and adjust content creation and advertising strategies based on customer feedback.

In short, social media has greatly facilitated the connection between brands and their customers through its interactivity, content innovation capabilities and data analytics. By effectively utilizing these tools, brands can build a strong network of customer relationships and maintain an edge in the highly competitive marketplace [4].

3. Social Media Marketing Challenges and Strategies

Despite the enormous opportunities social media marketing presents, brands must deal with numerous challenges. Privacy concerns are at the forefront as social media platforms collect large amounts of user data, raising questions about data security and compliance. As users become more sensitive to privacy issues, brands must ensure transparency and inform users about data collection and usage. They need to comply with regulations such as the GDPR and protect user data with advanced encryption technologies, thus preventing data breaches [5].

Another major challenge is information overload, where the sheer volume of content on social media can overwhelm users and make it difficult for marketing messages to stand out. To address this issue, brands should utilize data analytics and artificial intelligence to provide highly relevant content to their target audience. Utilizing visuals, interactivity, and creativity to create high-quality, engaging content can help capture users' attention. Additionally, strategically scheduling content postings to avoid peak times can increase visibility [6].

Negative feedback is also an important issue due to the open nature of social media platforms, where negative comments can easily spread and potentially damage a brand's reputation. Brands need to establish a professional social media team to monitor and respond to negative comments in a timely

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manner to prevent escalation. Sincere and transparent responses demonstrate a brand's responsibility and commitment to solving problems. At the same time, positive content and user interactions help guide public opinion and reinforce a brand's positive image [7].

Looking ahead, brands must keep up with the evolving trends and technological innovations in social media to maintain a competitive edge. The rise of short-form video and live streaming has gone mainstream, providing new avenues for user engagement. Brands should explore these formats to enhance interaction. Utilizing Augmented Reality (AR) and Virtual Reality (VR) can provide immersive experiences and enhance user interaction. Integrating social commerce features can create a seamless connection between social media and online shopping, improving the customer shopping experience [8].

4. Case Study: Nike's Social Media Strategy

The interactive nature of social media. Nike specializes in engaging their audience through interactive social media campaigns. A notable example is their #JustDoIt campaign, encouraging users to share their fitness journeys and accomplishments using themed hashtags. Nike actively responds to user-generated content to create community and deepen customer connection.

Content Innovation. Nike continues to produce innovative content that resonates with their audience. They produce high-quality videos that tell inspirational stories, such as Colin Kaepernick's "Crazy Dreams" campaign. This content promotes their products, aligns with Nike's brand values, and creates an emotional connection with their audience.

Customer service through social media. Nike utilized social media to provide customer service by opening dedicated Twitter accounts (e.g., @NikeSupport) to provide quick, helpful responses to customer inquiries. This real-time interaction leads to the timely resolution of issues, increasing customer satisfaction and loyalty.

Data Analytics. Nike uses data analytics to understand customer preferences and optimize social media strategies. By analyzing engagement metrics, they can customize content that matches their audience's interests and improve their marketing campaigns' effectiveness. This data-driven approach helps Nike stay relevant and competitive in the marketplace [9].

They are addressing Social Media Challenges. Nike ensures transparency in data collection and compliance with regulations such as GDPR to protect user privacy. They tackle information overload by leveraging artificial intelligence and data analytics to personalize content, making it more relevant and engaging for their audience. Additionally, Nike uses visually appealing and creative content to capture attention. To manage negative feedback, Nike has a dedicated social media team that monitors and responds to comments promptly and transparently, demonstrating their commitment to customer satisfaction and reputation management.

Changing trends. Nike has been at the forefront of social media trends, adopting new formats such as TikTok and Instagram Reels short videos and experimenting with AR and VR technology to create immersive experiences. They have also integrated social commerce features to make it easier for customers to shop directly from social media platforms [10].

Nike's case study demonstrates how social media's interactivity, content innovation, and data analytics can be effectively utilized to build strong customer relationships and maintain a competitive advantage.

5. Management Insights

As social media develops in the digital age, brands can gain valuable management insights from these marketing and customer relationship management platforms.

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First, brands should make the most of data-driven decisions to optimize their social media strategies. By deeply analyzing customer interaction data, brands can better understand customer behavior and preferences, allowing them to create personalized and highly relevant content. This not only increases customer engagement but also enhances customer loyalty. Additionally, data analysis helps brands monitor content performance and evaluate the effectiveness of marketing campaigns, enabling them to adjust strategies based on customer feedback and maintain competitiveness.

Second, privacy and security issues are critical factors that brands must prioritize in social media marketing. With growing user concern over privacy protection, brands need to ensure transparency in data collection and usage, strictly complying with regulations such as GDPR. By using advanced encryption technologies to protect user data, brands can prevent data breaches and build trust, strengthening customer confidence and loyalty.

Finally, brands should focus on combining content innovation with real-time interaction to improve customer satisfaction and brand image. In an era of information overload, brands need to attract audiences with innovative and creative content and use AI and data analytics for personalized content delivery. Also, brands should establish a professional social media team to promptly monitor and respond to customer feedback. Through instant interaction and transparent communication, brands can effectively manage negative comments, demonstrate responsibility in problem-solving, reinforce their positive image, and boost customer satisfaction and loyalty.

6. Conclusion

Social media marketing has greatly increased brand awareness, strengthened customer relationships, and boosted sales. However, privacy concerns, information overload and negative feedback remain. Addressing these challenges requires transparent data management, accurate content marketing, and swift crisis response strategies. Keeping up with technological innovations and social media trends will help brands maintain a competitive edge.

Moving forward, brands must continue to research and adapt to the ever-changing social media landscape and explore new marketing strategies to meet the demands of an increasingly complex marketplace. Through continuous optimization and innovation, brands can effectively use social media platforms to achieve their marketing goals, build strong customer networks, and remain competitive.

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A Financial Analysis and Valuation of Chevron Corporation

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Abstract: With the continuous development of the global economy, the demand for energy continues to grow, and the market size of oil and gas as an important source of energy continues to expand, and the growth potential of the oil and gas market in the future is still huge. As an internationally renowned energy company, Chevron occupies an important position in the global oil and gas market. Firstly, the financial indicator analysis method is used to compare the financial data in 2023 with the other three energy companies to obtain its financial strength with strong asset liquidity, high solvency and strong profitability. Secondly, from the aspects of profitability, development ability and valuation, it is concluded that Chevron has strong market competitiveness, large room for stock price growth, and greater investment opportunities. Finally, it is concluded that Chevron has a high investment value, but it still faces certain risks and challenges, and it is necessary to pay attention to the impact of international oil price fluctuations on the company's performance and should pay close attention to its risk factors and take corresponding measures to face it positively.

Keywords: Chevron Corporation, Energy Industry, Performance Evaluation, Financial Valuation

1. Introduction

Chevron is one of the world's largest energy companies, founded in 1879 as Chevron Texaco and renamed Chevron Corporation in 2005, headquartered in San Ramon, California, with operations in more than 180 countries. Chevron has a sales network in China, with lubricant production plants in Tianjin and Shanghai, and its Chevron G&F lubricants, DELO and Chevron Techron are trusted by consumers for their excellent quality and performance [1].

Chevron's operations cover all aspects of the oil and gas industry: exploration, production, refining, marketing, transportation, petrochemicals, power generation, and more. In industries such as oil, gas, petrochemicals, and chemicals, Chevron is a global leader. The upstream business includes the primary exploration, development, production and transportation of crude oil and natural gas. Processing, liquefaction, transportation and regasification are related to LNG; transportation of crude oil through major international oil export pipelines; Transportation, storage and marketing of natural gas and a natural gas liquefaction plant. The downstream business mainly includes the refining of crude oil into petroleum products; marketing of crude oil and refined oil. Lubricant; manufacturing and marketing of renewable fuels; transportation of crude oil and refined products by pipelines, ships, motorized equipment and trams. Manufacture and sale of commercial petrochemicals, industrial plastics, and fuel and lubricant additives.

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Chevron was the pioneer of the "hydrocracking" and "isomeric dewaxing" base oil production processes, and today the "hydrogenation" process is widely used in the base oil production and refining industries [2]. With the advantages of an integrated industrial chain, Chevron is one of the few lubricant manufacturers in the world that can achieve end-to-end supply from base oil to additives.

As of December 2023, Chevron's operating revenue for the past quarter was $48,933. Chevron's revenue for the last 12 months was $196913. Chevron reported third-quarter earnings last month that beat market expectations, backed by positive news on improving global demand and increased U.S. oil field production, with explosive growth in both profit and sales. Chevron reported third-quarter earnings last month that beat market expectations, backed by positive news on improving global demand and increased U.S. oil field production, with explosive growth in both profit and sales. Among them, net profit was $11.2 billion and earnings per share were $5.66, almost double that of last year. Moreover, the company's cash flow surged to a record $15.3 billion in the third quarter, well above the previous quarter, underscoring its financial strength.

U.S. energy company Chevron Inc. (NYSE: CVX) remains in a strong cash position for fiscal year 2023 as it pays nearly $11 billion in dividends to shareholders. In addition to this, its dividends have continued to grow over the past 37 years. The company is currently offering a quarterly dividend of $1.63 per share, with a dividend yield of 3.93% as of April 28.

According to Insider Monkey's Q4 2023 database, 71 hedge funds hold shares in Chevron Corporation (NYSE: CVX), down slightly from 72 in the previous quarter. The total value of these shares is more than $21.6 billion. Warren Buffett's Berkshire Hathaway was the company's major shareholder in the fourth quarter.

2. Performance Evaluation

2.1. Liquidity

Table 1: Liquidity ratios of Chevron and its competitors in 2023.

Company Names	Current ratio	Quick ratio	Cash ratio
Chevron	1.27	1.01	0.25
Marathon Oil	1.59	1.13	0.5
Senko Energy	1.44	0.88	0.18
Cenovus	1.56	0.91	0.36

Data Source: Nasdaq.

The current ratio is a measure of a company's ability to repay its short-term debts. It is generally believed that a reasonable current ratio is 2, and it is believed that if the current ratio is less than 1, its liquidity will be poor. The current ratios of the four companies are all greater than 1 and less than 2, indicating that the ability to repay short-term debts is still relatively high [3].

The quick ratio complements the current ratio and is more straightforward and credible than the current ratio. The minimum quick ratio that is generally considered reasonable is 1 [4]. The quick ratios of Chevron and Marathon are both greater than 1 at 1.01 and 1.13, and Chevron's value is closest to 1, indicating that its short-term solvency is high, and the risk is small. However, the value of Marathon crude oil company is too high compared to 1, indicating that it occupies too much capital in liquid assets, which will increase the opportunity cost of enterprise investment. The quick ratios of Senko Energy and Cenovus are less than 1 at 0.88 and 0.91, indicating that their short-term debt repayment risks are relatively high.

If the current ratio is high, but the liquidity of current assets is low, the short-term solvency of the enterprise is still not high. To measure a company's ability to repay short-term debt, the current ratio

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and quick ratio should be combined. As Table 1 shown, Chevron's current ratio of 1.27 is greater than 1 and less than 2, and its quick ratio of 1.01 is greater than 1 but close to 1, indicating that it is more liquid. Marathon Crude Oil has a current ratio of 1.59 greater than 1 and less than 2, and a current ratio of 1.13 greater than 1 but too high, and its liquidity is weaker than Chevron. Senko Energy and Cenovus have current ratios of 1.44 and 1.56, both greater than 1 and less than 2, and quick ratios of 0.88 and 0.91, both greater than 0.5 and less than 1, and the liquidity of both companies is poor.

The cash ratio is the best indicator of a company's ability to pay its current liabilities directly. It is generally considered that 0.2 or more is good. Chevron, Marathon and Cenovus have cash ratios of 0.25, 0.5 and 0.36, all of which are greater than 0.2, indicating that the three companies have strong liquidity capabilities. However, the high ratio between Marathon and Cenovus means that its liquid assets are not being used wisely, resulting in low profitability of cash-like assets, which are too high and will lead to an increase in their opportunity cost. Senko Energy's cash ratio of 0.18 is less than 0.2, indicating its poor liquidity.

In summary, Chevron has higher short-term solvency, less risk, stronger liquidity and strong liquidity than the other three companies.

2.2. Solvency

Table 2: Solvency ratios of Chevron and its competitors in 2023.

Company Names	Total debt ratio	Long-term debt ratio	Time-interest-earned
Chevron	0.62	0.08	64.1
Marathon Oil	0.29	0.29	0.01
Senko Energy	0.49	0.13	9.36
Cenovus	0.53	0.13	8.51

Data Source: Nasdaq.

The debt-to-asset ratio is a measure of a company's ability to use creditors to provide funds for its business activities [5]. It is generally believed that the appropriate level of asset-liability ratio is 0.4~0.6. The asset-liability ratios of Senko Energy and Cenovus are 0.49 and 0.53, and the asset-liability ratio of Chevron is 0.62, which is slightly higher, but it is about a reasonable asset-liability ratio, indicating that these three companies have sufficient funds, less debt, less debt repayment risk, financial stability, and relatively strong business management ability. The asset-liability ratio of Marathon Crude Oil Company is 0.29, and its asset-liability ratio is too low, indicating that it has more abundant funds, less debt, less debt repayment risk, less financial risk, and can better cope with market changes and economic fluctuations. However, it also means that its ability to use external funds is poor and too conservative, which may lead to its interest pre-tax deduction not being effectively utilized, and not making full use of creditors' capital for business activities.

The long-term debt ratio is one of the indicators that reflect the long-term solvency of an enterprise. It is generally considered that less than 0.2 is appropriate [6]. As Table 2 shown, Chevron's long-term debt ratio is 0.08, and Senko Energy's and Cenovus's long-term debt ratios are both 0.13. The long-term debt ratio of Marathon Crude Oil Company is 0.29, which is a high index, indicating that its long-term debt repayment ability is weak and its dependence on long-term debt is high.

The interest coverage ratio is used to measure a company's ability to pay interest on its liabilities. The ideal multiple is more than 1.5 times. Chevron's interest coverage ratio of 64.1 is well above 1.5, indicating that it has a strong ability to pay interest on its debts, has a strong long-term solvency, provides a degree of security in repaying debt and interest, and has sufficient surpluses to cover the interest expenses involved in its debt payable. The interest coverage ratios of Senko Energy and Cenovus are 9.36 and 8.51, both higher than 1.5, indicating that the long-term solvency is also strong.

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Marathon's interest coverage ratio is 0.01, well below 1.5, indicating that it will face the risk of losses and reduced security and stability of debt repayment.

In summary, Chevron has a lower solvency and a slightly greater financial risk than Senko Energy and Cenovus. However, compared with the above two companies, Chevron has a stronger long-term solvency and a stronger ability to pay interest on its debts, and its assets that can be used to repay non-current liabilities are more guaranteed, and there is sufficient surplus to cover the interest expenses involved in its debts payable.

2.3. Profitability

Table 3: Profitability ratios of Chevron and its competitors in 2023.

Company Names	Gross Profit margin	Net Profit margin	Asset Turnover
Chevron	0.27	0.11	0.75
Marathon Oil	0.13	0.07	1.73
Senko Energy	0.59	0.17	0.55
Cenovus	0.21	0.08	0.97

Data Source: Nasdaq.

Gross profit margin is one of the important indicators to measure the profit level of a company. It is generally believed that in the energy industry, more than 0.2 is good. The gross profit margins of Chevron, Senko Energy and Cenovus are 0.27, 0.59 and 0.21 respectively, indicating that the gross profit of the three companies is high, and the total profit will also increase. However, the gross profit margin of Marathon Crude Oil Company is 0.13, which is low, indicating that its gross profit is not high, and there may be inflated costs and hidden revenues, and its profitability is weak.

Net profit margin is used to measure the ability of a company to obtain sales revenue in a certain period. It is generally believed that more than 0.1 is good in the energy industry. As Table 3 shown, the net profit margins of Chevron and Senko Energy are 0.11 and 0.17 respectively, indicating that the two companies have a high proportion of sales revenue converted into net profit, high operating efficiency and strong profitability. Although the net profit margins of Marathon Crude Oil Company and Cenovus are 0.07 and 0.08, they are generally considered to be poor below 0.03, and compared with Chevron and Senko Energy, the profitability of these two companies is not bad but relatively weak.

The asset turnover ratio reflects the management quality and utilization efficiency of all assets of the enterprise. It is generally considered appropriate between 0.8 and 1. Chevron's asset turnover ratio is 0.75, close to 0.8, and Cenovus’s asset turnover ratio is 0.97, indicating that the two companies have a faster total asset turnover, stronger sales capacity, and higher asset utilization efficiency. The asset turnover ratio of Marathon Crude Oil Company is 1.73, indicating that it has strong asset management efficiency, fast total asset turnover, strong sales capacity and high asset utilization efficiency. Senko Energy's asset turnover ratio is 0.55, which is a low indicator, indicating that its asset utilization efficiency is weak, which may mean that the company is not fully utilizing existing assets or has redundant and idle assets.

To sum up, compared with Marathon Crude Oil Company and Cenovus, Chevron Company is relatively reasonable in terms of asset turnover speed and utilization efficiency, and its gross profit margin is higher than that of the two companies, and the business operation is good, the operating efficiency is high, and the profitability is relatively strong. Compared with Senko Energy, Chevron's business operation and operating efficiency are slightly weaker than the latter, but they are also in the better category, and its asset turnover speed and utilization rate are much better than the latter, and its profitability is stronger.

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3. Valuation

In terms of profitability, Chevron's forward earnings per share of 12.95 (see Table 4) are higher than Senko Energy and Cenovus's 3.95 and 2.01, indicating that its dividend distribution sources are sufficient. The asset appreciation ability is strong, the profitability is strong, the shareholder value is high, and the market competitiveness is strong. However, it is smaller than Marathon Crude Oil Company's 19.29, which can continue to enhance its profitability by increasing operating income, reducing costs, and optimizing capital structure. Chevron's annual gross profit margin was 26.83% (see Table 5), quarterly gross margin was 28.50%, annual net profit margin was 10.85% (see Table 6), and quarterly net profit margin was 4.62%, all of which were higher than Marathon Crude Oil Company's 13.35%, 10.13%, 6.52%, and 4.00%, and its Cenovus annual gross profit margin was 59.28%, indicating that its products are more competitive in the market, and higher cost control capabilities mean that there may be higher return potential and stronger profitability [7]. However, the annual gross profit margin and annual net profit margin of Senko Energy are 59.28% and 16.90%, which can continue to enhance its profitability by increasing the added value of products, expanding the market, and strengthening marketing.

Table 4: Financial forecast analysis in 2023.

	Chevron	Marathon Oil	Senko Energy	Cenovus
Ticker symbol	CVX	MPC	SU	CVE
Share price	$162.08	$197.01	$39.15	$20.75
TTM EPS	13.6	23.53	3.77	1.55
NTM EPS	12.95	19.29	3.95	2.01
EPS growth rate	-4.78%	-18.00%	4.77%	29.68%
Revenue growth rate	-2.75%	-8.17%	3.51%	-1.34%
TTM P/E ratio	11.92	8.37	10.38	13.38
NTM P/E ratio	12.52	10.21	9.91	10.32
PEG	(2.49)	(0.47)	2.18	0.45
GP/A	20.19%	23.04%	32.87%	20.39%

Data Source: Nasdaq.

In terms of developing capacity, Chevron's earnings per share growth rate and earnings growth rate of -4.78% and -2.75% are higher than the values of Marathon Crude Oil Company of -18.0% and -8.17%, indicating that its operating situation and management capabilities are strong, and its development ability is strong, and its stock price has more room to rise in the future [8]. However, Chevron's earnings per share growth rate and earnings growth rate are smaller than Senko Energy's 4.77% and 3.51% and Cenovus's 29.68% and -1.34%, and it can continue to enhance its development capabilities by strengthening financial management, improving product quality, expanding market share, and establishing risk management strategies. Chevron's GP/A value of 20.19% is smaller than that of the three companies of 23.04%, 32.87% and 20.39%, and it can continue to enhance its development capabilities by increasing sales, improving asset utilization, and optimizing capital structure.

Table 5: Annual gross profit margin of Chevron and its competitors from 2020 to 2023.

	12/31/2023	12/31/2022	12/31/2021	12/31/2020
CVX	26.83%	27.82%	27.40%	23.39%
MPC	13.35%	14.53%	8.31%	5.80%

Table 5: (continued).

SU	59.28%	61.52%	60.98%	56.76%
CVE	21.06%	23.91%	22.17%	8.70%

Data Source: Nasdaq.

Table 6: Annual net profit margin of Chevron and its competitors from 2020 to 2023.

	12/31/2023	12/31/2022	12/31/2021	12/31/2020
CVX	10.85%	15.05%	10.04%	-5.87%
MPC	6.52%	8.18%	8.12%	-14.08%
SU	16.90%	15.56%	10.53%	-17.51%
CVE	7.87%	9.64%	1.27%	-17.56%

Data Source: Nasdaq.

In terms of valuation, the energy sector currently trades at a forward P/E ratio of 12.2. Chevron's forward P/E ratio of 12.52 is closest to the industry level, indicating that it is less risky, more stable and reliable [9]. However, the forward P/E ratios of Marathon Crude Oil Company, Senko Energy Company and Cenovus are all lower than 12.2 and 10.21, 9.91 and 10.32 respectively, indicating that there are potential risks, fierce competition in the industry, declining market share, possible financial problems of the company, the company may lose money, and the prospects of the market are not very good. Chevron, Marathon and Cenovus have PEG values of -2.49, -0.47 and 0.45 all less than 1, and the stock prices are all undervalued, and there are investment opportunities, among which Chevron has a lower value than the other two companies, indicating that the possibility of future stock price increases is greater, and the investment opportunities are greater. However, Senko Energy's PEG value of 2.18 is greater than 1, and the stock price is overvalued, indicating that the market has high expectations for its future growth, and its reasonable growth expectations should be considered from other aspects.

4. Strategy and Risks

Strategy: In 1999, Chevron established its business objectives to be the oil company with the highest shareholder return and to guarantee a return on operating capital of at least 12%. To this end, the company has launched a "4+1" strategy, which is to pursue excellent operational performance, relentlessly reduce costs, wise and efficient working capital, adjust investment portfolios to pursue profitable growth, and strengthen the development of corporate organizational capabilities [10]. Chevron has established a strategic partnership with Tuhu to provide more high-quality and high-standard services for car owners.

Geopolitical Risks: May have a significant impact on global crude oil markets and price changes, and political instability and positive changes in the legal and regulatory environment may pose challenges to Chevron's business operations and profitability.

M&A risk: Chevron had planned to acquire Hess but faced the risk of not being able to complete it within the expected timeframe. This can have a negative impact on the company, such as not being able to realize the expected benefits of the acquisition, disrupting the company's current plans or operations.

Market risk: With the continuous change of the global energy market and the intensification of competition, it may pose challenges to the operation and development of the company. Chevron is constantly adapting its strategy and business model to market changes, and if the company fails to successfully develop resources, its business scope will be reduced, and the company's operations may be disrupted by natural or human causes beyond its control.

Financial risk: A decline in Chevron's price-to-earnings ratio will result in a decrease in returns. High gross and net profit margins may indicate a company's competitive advantage, but it can also mean higher operational risk.

In summary, while pursuing its strategic goals, Chevron also faces certain risks and challenges. To maintain their competitive advantage and ability to sustain themselves, companies need to pay close attention to market dynamics and risk factors and take appropriate measures to respond to them.

5. Conclusion

This paper analyzes Chevron's business investment from the perspective of corporate accounting and financial management.

Firstly, from the perspective of performance evaluation, from the aspects of asset liquidity, solvency, and profitability, through the analysis of financial indicators such as current ratio, long-term debt ratio, and gross profit margin, it is concluded that Chevron has a high ability to repay debts, strong liquidity.

Secondly, from the perspective of asset evaluation and estimation, from the perspective of profitability, through the analysis of financial indicators such as gross profit margin and net profit margin, it is concluded that Chevron can effectively control costs, has high return potential, and has strong profitability; From the perspective of development ability, through the analysis of financial indicators such as revenue growth rate and GP/A value, it is concluded that Chevron's operation and management capabilities are strong and development capabilities are strong; From the valuation aspect, through the index analysis of the forward P/E ratio and PEG value, it is concluded that the risk is lower and the investment opportunity is greater.

Finally, from the perspective of asset valuation strategy and risk, it is concluded that Chevron is facing certain risks and challenges while pursuing its strategic goals. Companies need to pay close attention to market dynamics and risk factors and take appropriate measures to deal with them.

The comprehensive analysis shows that Chevron is a competitive energy company with excellent financial position, profitability and future value. However, the company still needs to pay attention to the issues of costs and expenses, product quality, etc., to further improve profitability and development capabilities. For investors, Chevron has a high investment value, but it is necessary to pay attention to the impact of international oil price fluctuations on the company's performance and should consider the limitations of industry risks and growth potential.

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A Financial Analysis and Valuation of Home Depot

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Abstract: This paper presents a detailed financial analysis and market evaluation of major players in the home improvement industry—Home Depot, Lowe's, Wayfair, and Floor & Decor Holdings. It assesses these companies based on their liquidity, solvency, and profitability to provide investors with actionable insights into their financial health and market position. The analysis reveals that Wayfair, despite its robust short-term liquidity, faces challenges with profitability. Home Depot and Lowe's both demonstrate strong financial stability with efficient operations that translate sales into profit effectively, though Lowe's exhibits some concerns related to its debt levels. Floor & Decor shows impressive growth but must improve its operational efficiency to enhance profitability. Additionally, the study explores industry trends impacting these businesses, including changes in consumer preferences and economic conditions affecting spending on home improvements. It also examines the companies' responses to these trends, such as adapting their business models and strategies to sustain growth and competitiveness. The paper concludes with investment considerations, highlighting Wayfair as a potentially high-reward but risky investment due to its growth prospects and operational challenges. Home Depot remains a relatively safe bet with stable financial returns, while Lowe's and Floor & Decor might require cautious evaluation due to their financial and market positions. This comprehensive analysis serves as a crucial tool for investors aiming to navigate the complexities of the home improvement sector and make informed decisions.

Keywords: The Home Depot, Financial Analysis, Valuation, Home Improvement Industry

1. Introduction

This paper aims to analyze several leading companies in the home improvement industry, including Home Depot, Wayfair, Lowe's, and Floor & Decor Holdings. Through a deep examination of these companies' business models, market performance, and recent developments, this paper aims to provide valuable insights and recommendations for investors.

Home Depot is a global leader in the retail of home improvement and construction products, primarily catering to builders, contractors, and do-it-yourself customers. With a vast network of physical stores and an expanding online presence, the company holds a substantial market share in the United States, Canada, and Mexico [1]. Over the past four years, the financial year 2024 marked a downturn in its rising trend, with revenues dipping to $152.669 billion. The company's impressive peak in the prior year could be attributed to strategic expansions and market demand.

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Lowe's is a major retailer of building materials and home improvement products, with a presence comparable to Home Depot across the United States and Canada. Targeting both DIY consumers and professional contractors, Lowe's focuses on offering high-quality products and excellent customer service [2]. With a steady increase in total revenue from $89.597 billion in 2021 to a high of $97.059 billion in 2023, The subsequent fall to $86.377 billion in 2024 could suggest a correction after an exceptional growth phase.

Wayfair operates as an online retailer specializing in furniture, home decoration, and household goods. Renowned for its extensive product selection and convenient shopping experience, the company serves customers primarily in North America and Europe. Wayfair's revenues have declined consistently from a high of $14.145 billion in 2020 to $12.003 billion in 2023, As an online retailer, Wayfair's dip could reflect the normalization of online shopping trends post a boom during certain events like the pandemic.

Floor & Decor Holdings specializes in flooring and related decor materials, offering a wide range of products including hardwood, tile, stone, and accessories. With numerous stores across various states in the U.S., the company caters to both residential and commercial customers. Floor & Decor Holdings had a remarkable growth trajectory, with revenues climbing from $2.426 billion in 2020 to $4.414 billion in 2023. This annual increase suggests a successful expansion strategy.

On the positive side, the industry seems to be bouncing back, with an anticipated improvement in the availability of raw materials, although prices are expected to be higher. Home improvement trends are shifting to focus on quick remodels that improve the quality of life and accessibility within homes. This includes adding features like grab bars, walk-in showers, and smart home upgrades. Another trend driven by the ongoing impact of the pandemic is the increase in remote work, which has led to sustained demand for home office renovations. Additionally, tax credits for energy-efficient home improvements are encouraging homeowners to invest in renovations that will bring long-term savings and environmental benefits. The industry is also facing challenges. The Harvard Joint Center for Housing Studies predicts a downturn in home remodeling, with spending expected to shrink for the first time since 2010, though the rate of decline may ease towards the end of the year [3]. This anticipated downturn is attributed to high prices, elevated interest rates, and weak home sales, which create uncertainty and may dampen remodeling activity.

2. Performance Evaluation

This section evaluates the liquidity, solvency, and profitability of Home Depot (HD) and its competitors Lowe's (LOW), Wayfair (W), and Floor & Decor Holdings (FND). These financial ratios provide insights into the ability of these companies to meet their short-term obligations, manage long-term debts, and generate profits. This comprehensive analysis highlights the strengths and potential challenges each company faces in maintaining financial stability and growth.

2.1. Liquidity

Table 1: Liquidity ratios of Company HD and its competitors.

	HD	LOW	W	FND
Current Ratio	135.25%	122.50%	84.97%	114.29%
Quick Ratio	39.97%	13.98%	81.54%	18.27%
Cash Ratio	17.08%	7.89%	61.89%	2.98%

Data Source: Nasdaq.

According to the current ratio shown in Table 1, it can be concluded that HD has the highest current ratio of 135.25%, indicating that it has sufficient current assets to cover current liabilities and has

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very strong liquidity. LOW and FND also have high current ratios of 122.50% and 114.29%, respectively, indicating good short-term solvency. W's current ratio is relatively low, at 84.97%, which means that its current assets are less than its current liabilities and may face some liquidity pressure.

For quick ratio, the quick ratio of W is extremely high, reaching 81.54% and indicating that even without relying on slow-moving assets such as inventory, the company can still meet short-term liabilities well. HD also has a high quick ratio of 39.97%, demonstrating good debt-paying ability. The quick ratio of FND and LOW is relatively low, at 18.27% and 13.98% respectively, which may indicate that these two companies rely on a larger proportion of inventory or other assets that are not easily liquidated quickly.

For Cash Ratio, W exhibits a very high cash ratio of 61.89%, demonstrating that it has ample liquid assets to cover its current liabilities. HD's cash ratio is also relatively strong at 17.08%, suggesting a comfortable cash and equivalents position. LOW and FND have lower cash ratios at 7.89% and 2.98%, respectively, indicating higher short-term liquidity risk.

In conclusion, W exhibits very strong debt repayment capabilities in the short term, which could be attributed to its business model heavily reliant on direct-to-consumer sales online, minimizing physical inventory needs compared to traditional retailers; HD shows good overall liquidity across all three indicators, it has maintained a focus on enhancing customer experience and operational efficiency, which helps sustain its financial health. LOW and FND, while having adequate current ratios, their lower quick and cash ratios suggest potential reliance on slower-to-convert assets or future income to meet short-term liabilities. FND has been opening new stores and entering new markets, such as the flagship store in New York City. Such expansions require significant capital outlays, which could tie up cash that otherwise might bolster liquidity measures; LOW has also demonstrated commitment to expanding its market share, particularly in the professional contracting space [4].

For W and HD, such liquidity metrics may be more attractive to investors, whereas LOW and FND might need strategic adjustments or improvements to enhance their liquidity positions.

2.2. Solvency

Table 2: Solvency ratios of Company HD and its competitors.

	HD	LOW	W	FND
Total Debt Ratio	98.64%	136.01%	177.92%	58.59%
Long-term Debt Ratio	55.85%	84.66%	89.00%	4.18%
Interest Ratio	11.25	8.36	-	32.48

Data Source: Nasdaq.

For total debt ratio shown in Table 2, W has the highest total debt ratio at 177.92%, indicating that it has significantly more debt than assets; LOW follows with a total debt ratio of 136.01%, also indicating substantial reliance on debt and HD has a lower yet substantial total debt ratio at 98.64%; FND presents a much healthier picture with a total debt ratio of 58.59%, showing a more balanced approach between debt and assets.

For long-term debt ratio, W again shows a high long-term debt ratio at 89.00%, suggesting a significant amount of its debt is long-term; LOW also has a high long-term debt ratio at 84.66%; HD has a moderate long-term debt ratio of 55.85%, reflecting a more conservative debt structure; FND has a very low long-term debt ratio of 4.18%, indicating minimal reliance on long-term debt, which may imply greater financial flexibility and less risk of long-term financial commitments.

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For Interest Coverage Ratio, FND stands out with an exceptionally high-interest coverage ratio of 32.48, highlighting its strong earnings ability to cover interest expenses comfortably; HD and LOW, with interest ratios of 11.25 and 8.36, still maintain adequate coverage, though it is less robust compared to FND; W had negative earnings before interest and taxes, which would make this ratio irrelevant for the period.

In summary, HD's solvency ratios show a balanced approach to debt management, with a relatively moderate total debt and long-term debt ratio; LOW shows higher total and long-term debt ratios compared to HD, indicating a more aggressive debt position. However, LOW has faced challenges such as a significant decline in comparable-store sales and has been downgraded by analysts due to performance concerns compared to its competitors; W has an aggressive growth strategy, primarily funded through debt. W operates in the e-commerce space, which requires substantial upfront investment in technology and market expansion. Its negative earnings before interest and taxes could suggest potential challenges in generating sufficient earnings to cover interest expenses; FND has very low long-term debt ratios and a high interest coverage ratio, indicating strong earnings relative to its debt obligations.

2.3. Profitability

Table 3: Profitability ratios of Company HD and its competitors.

	HD	LOW	W	FND
Gross Margin	33.38%	33.39%	30.55%	42.10%
Operating Margin	14.21%	13.38%	-6.77%	7.28%
Net Profit Margin	9.92%	8.94%	-6.15%	5.57%
Asset Turnover	2.00	2.02	3.40	0.98

Data Source: Nasdaq.

For gross margin shown in Table 3, FND stands out with the highest gross margin of 42.10%, indicating its ability to retain a larger percentage of each dollar of sales as profit before accounting for certain expenses; HD and LOW show very similar gross margins, around 33.38% and 33.39% respectively; W has a slightly lower gross margin at 30.55%, which could be due to its e-commerce business model that might involve higher logistics and operating costs.

For operating margin, HD has the highest operating margin at 14.21%, LOW follows closely at 13.38%, suggesting that they have efficient management of operational costs relative to sales; FND shows a moderate operating margin of 7.28%; While W has a negative operating margin of -6.77%, indicating that there are extremely high operating expenses compared to total revenue.

For net profit margin, HD and LOW again lead with net profit margins of 9.92% and 8.94%, demonstrating its ability to translate sales into net income effectively; FND has a reasonable net profit margin of 5.57%, lower than HD and LOW, indicating that it retains less net income from each dollar of revenue; W shows a negative net profit margin of -6.15%, reflecting significant challenges in achieving profitability under its current operating model.

According to asset turnover, W has the highest asset turnover ratio at 3.40, indicating that it generates significantly more revenue per dollar of assets compared to the others. This high ratio is typical for e-commerce platforms, which typically require less physical asset investment; HD and LOW have similar asset turnovers, around 2.00 and 2.02 respectively, suggesting efficient use of assets to generate revenue; FND has the lowest asset turnover at 0.98, indicating less revenue generation per dollar of assets, which could be due to a heavy investment in physical stores and slower turnover of inventory.

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In conclusion, HD demonstrates strong performance across all margins and decent asset utilization, reflecting efficient operations and effective cost management; LOW follows closely but shows slight variations that could imply room for improvement in cost control or operational efficiencies; FND, despite its strong gross margin, needs to enhance its operational efficiency and asset utilization to boost its bottom line; W faces significant challenges in terms of profitability and operational efficiency, although it excels in generating revenue relative to its asset base. Strategies to convert this revenue efficiency into profitability would be crucial for W's sustainable growth.

3. Valuation

Next, this paper will conduct a valuation for four companies, judging their expected performance through some of their financial indicators, and analyze the strategies and risks of the companies and related industries [5].

3.1. Forecast

As Table 4 shown, HD's TTM P/E is 23.09 and its NTM P/E is 22.73 (indicating stable earnings expectations); LOW TTM P/E is 18.08 (lower, suggesting better valuation compared to HD), its NTM P/E is 19.43; W's TTM P/E is Negative (due to negative EPS), its NTM P/E is 69.67 (suggesting significant growth expectations or high risk); FND Holdings' TTM P/E is 54.00 (indicating potentially overvalued status), its NTM P/E is 64.18 (increasing, suggests worsening valuation). HD and LOW have P/E ratios indicating higher investor expectations compared to FND. W's negative TTM P/E is due to its negative EPS, but its high NTM P/E suggests that improvements in profitability are expected.

For revenue growth rate, Both W (5.8%) and FND (5.8%) show significantly higher revenue growth rates than HD (1.1%) and LOW (-2.3%). For the EPS growth rate, there is negative growth for LOW (-7.0%) and FND (-15.9%); HD shows slight positive growth (1.6%). W currently has negative TTM EPS but is expected to turn positive in the next twelve months [6].

HD's PEG ratio of approximately 14 is significantly high, which suggests that the stock may be overvalued given its relatively low growth rate of 1.6%. This high PEG ratio implies that the current price is steep relative to the rate at which the company's earnings are expected to grow [7]. While the other companies are not available.

W has the highest GP/A ratio (105.6%) among the four, indicating it is most effective at generating gross profit from its assets despite its current net loss. This could be a sign of potential if the company manages to control other costs or increase efficiency further; LOW (69%) also shows a strong GP/A ratio, slightly higher than HD's (66.6%), suggesting efficient asset utilization; FND Holdings has the lowest GP/A ratio (39.9%), indicating less efficiency in converting assets into gross profits compared to the others.

HD's annual gross margin shows fluctuation but is generally stable at around 33.5%. Net profit margin has a slight decline to 9.9%; For its quarterly margins, gross margin slightly fluctuates between 33.0% and 33.8%. Net profit margin has varied from 10.4% down to 8.1%; For LOW annual margins, gross margin is stable at around 33.3%. Net profit margin increased from 6.5% to 8.9%; But its quarterly net profit margin shows a consistent decrease from 10.1% to 5.5%; For W's annual margins, the gross margin has increased from 28.4% to 30.6%. Net Profit Margin has shown volatility, improving from -10.9% to -6.1%; For its quarterly margins, gross margin increased slightly from 29.6% to 30.3%. Net profit margin shows fluctuating negative margins, showing signs of improvement but remaining negative; FND Holdings' annual gross margin has slightly increased. Net profit margin shows a decreasing trend from 8.0% to 5.6%; Its quarterly net profit margin has declined significantly from 6.4% to 3.5%.

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HD and LOW show stable gross margins with varying degrees of net profit margin stability. W exhibits increasing gross margins but continues to struggle with negative net margins, though there is an improving trend. FND Holdings shows very stable high gross margins but a concerning decrease in net margins both annually and quarterly [8].

Table 4: Financial analysis of Company HD and its competitors.

	HD	LOW	W	FND
Share Price	$348.67	$236.08	$71.06	$122.59
TTM EPS	15.1	13.06	-1.16	2.27
NTM EPS	15.34	12.15	1.02	1.91
EPS Growth Rate	1.6%	-7.0%	N/A	-15.9%
Revenue Growth Rate	1.1%	-2.3%	5.8%	5.8%
TTM P/E	23.09	18.08	(61.26)	54.00
NTM P/E	22.73	19.43	69.67	64.18
PEG	14.53	N/A	N/A	N/A
GP/A	66.6%	69.0%	105.6%	39.9%

Data Source: Nasdaq & Estimize.

3.2. Strategy & Risks

HD is focusing on modest growth through new store openings despite a general downturn in the market. This strategy is aimed at capturing more market share and maintaining revenue streams even as same-store sales decline. The company is responding to changing consumer preferences by focusing on quick home remodels that improve quality of life and accessibility, such as smart home features and more accessible bathroom fixtures. This reflects an adaptation to ongoing trends accelerated by the pandemic, like remote work and energy efficiency. Like W, HD also focuses on the enhancement of Online Capabilities: HD continues to develop its online presence to cater to the surge in e-commerce, aiming to provide a seamless shopping experience that integrates its physical stores and online platforms.

HD recently reported a slight decline in sales, with fourth-quarter revenue falling by 2.9% to $34.8 billion. This drop was better than expected, but same-store sales still fell by 3.5% globally and 4% in the U.S. The decrease in "big ticket" transactions, those over $1,000, suggests that both builders and homeowners are undertaking smaller projects instead of significant remodels. HD projects only a modest 1% sales increase for the next fiscal year, primarily from new store openings, with same-store sales expected to decline by 1%. As the market becomes more competitive, particularly with the rise of online alternatives, Home Depot needs to continually innovate and improve its service offerings to maintain its market lead. There are other risks for HD: Like many others in the retail sector, Home Depot is potentially vulnerable to disruptions in the supply chain, which could affect inventory availability and cost structures.

LOW reported a 6.2% drop in comparable store sales for Q4 2023. Despite this, it managed to beat analyst forecasts. The company noted that its Pro segment held up better than its DIY segment, which still constitutes the majority of its revenue. FND plans to continue expanding, with up to 35 new stores expected to open, which might boost their overall sales. FND’s strategy to open new stores could be doubted to help drive revenue growth. W started a physical store this year, profit margins are often slim for physical retail, their revenue on it is still doubtful and it can also influence its NTM EPS. W, despite the potential for revenue growth, faces challenges in turning this into profit.

The home improvement industry overall is facing a tough market with weak consumer spending and a subdued housing market. Factors like inflation, slow housing sales, and a shift in consumer spending toward experiences rather than goods have contributed to this downturn [9]. However, segments like DIY and new home construction are slightly less impacted but are still experiencing slower growth compared to previous years [10].

4. Conclusion

Home Depot and Lowe's show stable gross margins with varying degrees of net profit margin stability. Home Depot has more variability in net margins quarterly, while Lowe's shows improvement annually. Wayfair exhibits increasing gross margins but continues to struggle with negative net margins, though there is an improving trend. Floor & Decor Holdings shows very stable high gross margins but a concerning decrease in net margins both annually and quarterly.

Based on the analysis above, Wayfair is more likely to be expected by investors. Considering that both Lowe’s and Floor & Decor Holdings have negative EPS growth rates, choosing them might be a value trap. Although Home Depot has a relatively stable performance and a positive EPS growth rate, because it has a high PEG ratio, it is expensive per unit of growth rate. Moreover, both its net profit margins and gross margins are declining according to quarterly and annual data. Moreover, Wayfair performs exceptionally in terms of GP/A, and the NTM EPS performance is promising. There is also hope that reductions in operating expenses could lead to a rebound in its net profit. It is a risky but promising stock.

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A Study of the Determinants of the Successful Mergers and Acquisitions

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Abstract: As studies in recent Merger and acquisition (M&A) research, single determinant is preferred to be analyzed, while this report tend to divide factors into 4 determinants towards successful M&A. This report will analyze the determinants of synergy, valuation, cultural difference and policy with several actual cases to support the objectivity of the analysis. Initially, the effect of “1+1>2” is called synergy which can be split into operating synergy, management synergy and financial synergy that will enhance the coordination internally and attain extra market segments externally. Secondly, as the asymmetry of information, overestimates of valuation may generate unsuccessful M&A, for the goodwill is intangible and easy to be overvalued. Thirdly, the cultural difference in region, belief and corporate experience will impact on the M&A positively or negatively, for the uncertainty of cultural differences will increase the difficulty but also the opportunity in M&A. Lastly, different target company in different regions with different strategies might cause different results. In fact, the 4 determinants have internal relation. The enterprises used to prefer to expand the market or the scale in the industry by vertical M&A and horizonal M&A, but nowadays they tend to make a technical acquisition.

Keywords: Mergers and Acquisitions, Synergy, Valuation, Cultural Difference

1. Introduction

As a universally acknowledged method to expand the comprehensive strength of an enterprise, Merger and acquisition (M&A) are powerful patterns to achieve this target in capital market. Based on enterprises’ different operating demand, M&A help the enterprise with different roles to achieve its development goals. To a great extent, the M&A is beneficial to achievement of market value management performance, and it also demonstrates the unique influence on driving the capital convergence, optimizing allocation of resources and achieving the goal of export-oriented growth. M&A has already been a common means in the business world, but how can it be more effective and successful remains to be explore.

The research of determinants of the successful M&A has been studied for a long time, but much of them tend to major in one determinant and carefully analyze the cause and effect, so it is proper to integrate the determinants in one essay. The following text content will be divided into 4 major determinants. Initially, for the determinant of synergy, vertical M&A like Suning.com Co., ltd. merged TianTian Express emphasize on the synergic effect in the view of value chain [1]. Horizonal M&A like S.F. Express merged Kerry Logistics analyze the drivers of the M&A and the result of

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synergic effect [2]. Cross-border M&A like Geely Automobile merged Volvo in the field of long-term synergic effect [3]. Furthermore, the research of the valuation occupies a large proportion. As the value of the target enterprise is easily to be overestimated due to the asymmetry of information, the overestimation led to the failure of the M&A, such as BYHEALTH merged LSG at the beginning of 2018 [4]. China Literature Limited Merged New Classics Media at the end of 2018 [5]. OIMEC merged Beijing Wanlihong Technology Co. Ltd. in 2021, so the financial risks and control deficiencies matter [6, 7]. On top of that, cultural difference will be a crucial determinant in M&A, for it can affect the results both positively and negatively according to the methods [8]. If improper method imply the M&A would be suffering like the case that Midea Group merged Wuxi Little Swan Company [9]. By contrast, in proper methods after the lesson of failure, Midea Group also merged KUKA successfully after considering the cultural differences [10]. Geely successfully merged Volvo in the aspect of corporate culture integration [11]. Additionally, distinct policies used in M&A have brought about different outcomes like CITIC securities intended to merge GF securities and GZ securities respectively which generated different consequences [12].

2. Synergy

The effect of synergy is the most important determinants among all factors contributing to the successful M&A, which will have an effect of “1+1>2”, leading to more competitive operating and financial capacities.

Synergy can be divided into 3 categories – operating synergy, management synergy and financial synergy. Operating synergy means the optimize integration of the company’s internal resources, improving the efficiency of productivity, thus occupying the brand advantage and enlarging the market share. Management synergy stands for optimizing the configuration and regroup those resources, by improving the operating ability and reducing expenses to reach the noticeable promotion of the management efficiency. Financial synergy represents affectively reallocate the financial resources, including complement internal financial capital, acquire funding advantages and enhance the ability to raise funds, to construct a better circulation of funds, lower the cost of capital and financial risks.

Among one supply chain, M&A would be happened not only acquisition of competitive industry or substitutes, but also their suppliers and customers, according to this M&A can be sorted into vertical M&A and horizonal M&A. According to the research of Lin Han, a classical vertical case of vertical M&A is TianTian Express was merged by Suning.com Co., ltd., while the former is in the downstream express industry and the latter is an excellent comprehensive sellers in China. Firstly, the operating synergy effects in this M&A exists, as the internet economy prevails, it is not a good choice for company to only sell products in retails, the new retail sector performance continues to decline, Suning.com Co., ltd. stepped off a cross-border merger to form downstream integration. During 2013-2016, TianTian Express took a seat among the excellent private express industry except for the five biggest delivery companies in China, and it is equipped with enormous scale, if being merged, Suning.com Co., ltd. will expand the business to the whole society, reaching noticeable improvement of delivery capacity. After the M&A, the Suning.com Co., ltd. realized the combination of online and offline, protecting the profit from fewer shocks of the internet economy trend. Secondly, as various indicators generally climbed up between 2016 and 2018, the debt was stably operated, this can be supposed by quick ratio increased from 0.77 to 1.17, for its satisfactory asset liquidity and the stable long term solvency capacity. The operating capacity and development capacity both shoot up for the inventory turnover, trade receivable turnover, total asset turnover, operating income growth rate, net profit growth rate and total asset growth rate all ascended noticeably. Last but not the least, the M&A is not simply aggregate the resources together, but the deep integration of business and

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management. The offline enterprises acquire the logistics enterprises built the all-platform development, laying a solid foundation in the industry [1].

As for the M&A can happen in the same industry, Kerry Logistics Network Limited was acquired by the S.F. Express Company in 2021, while the former has Asia's strongest network of international third-party logistics services providers and the latter is the domestic leading express logistics integrated service providers. As the government think highly of the development of cross-border logistics by emphasizing on the construction of international and domestic logistics channel, and Kerry Logistics being a competitive international logistics service provider, S.F. Express will direct access to the international market, seizing market share. Based on the research of Yiyun Zhang and Yang Wang in 2023, the customer basis of Kerry Logistics mainly specialized in high-end brands, it matches the target customers that S.F. Express wants to have, further enhancing the ability of integrated logistics solutions and improving the strategic layout of freight forwarding and international business. After the M&A, the operating cash flow per share drastically increased, from 0.67 in 2021 to 1.68 at the end of 2022, much higher than the YuanTong Express of 2.15 during the same period. This financial synergy may attribute to making better use of idle funds for research and development and investment. Nevertheless, as the revenue, net profit, net cash flow from operating activities and gross profit increased 29%, 45%,113% and 30.35% respectively, resulting better profitability and operating synergy after the M&A. The acquisition opened up the Southeast Asian market and international business, simultaneously supply chain business revenue growth has been significant, exerting brilliant synergetic effect [2].

When it comes to long-term synergetic effect in horizonal M&A, Geely Automobile Holdings merging Volvo Car AB will be an excellent example, it is a case of a snake swallowing an elephant, the huge gap in brand position between the two led many to underestimate the merger, but it actually has a clear upward trend in sales in 13 years. Geely Auto, as one of the fastest growing enterprises in China for 50 years, gained market share swiftly at a low price at first, while Volvo Car, being honored as the safest car in the world, is in the first echelon in both brand value and technical content. On the basis of the research of Baixiang Wang, the core purpose of the M&A is acquiring the technical resources of Volvo Car and improving the enterprise's technical capacity and innovation capacity. Although the problem of slow product switching, the strategic transition hitting a snag and exports suffered, the capacity of profitability and development still has a bright future. Additionally, by managing, coordinating and controlling the resources, the operating capacity rising markedly and the growth rate of cost-expense level was much lower than that of the net profit's which means the operating efficiency and management efficiency had both improved. On top of that, the improvement of financing capability, the enhancement of financing channels and sufficient cashflow supporting the financing synergy of the enterprise [3].

To sum up, the effect of synergy plays an important role in M&A, for one thing, for the vertical M&A not only can it reduce the transition of products to save cost, but also enhance the coordination during production and reducing the marketing expenses. For another thing, for the horizonal M&A, it can tap a new market as well as attain economy of scale.

3. Valuation

Valuation is an essential determinant in M&A, but as the asymmetry of information, the parties to a merger and acquisition are likely to value the same asset very differently, the acquiring companies worry about buying too high, while target companies worry about selling too low, generating contradictions. If overpaying during M&A, the financial risk of the enterprise will be dramatically increased [7].

Under normal circumstances, the acquiree's valuation is usually high in the merger. In line with Jinyi Zhu's research, it is astonishing when Life-Space Group Pty Ltd. (LSG) was merged by

Australia By Saint Pty Ltd, a subsidiary of BYHEALTH, on January 31th, 2018, the consideration was nearly 3.4 billion yuan, this figure far exceeds the company's equity premium of nearly 33 times (101.5 million yuan), forming part of the premium recognized 2.165 billion yuan of goodwill and 1.379 billion yuan of intangible assets. Unfortunately, in subsequent years, the impairment of goodwill and intangible asset drastically cut half down. Although the revenue of the parent company is increasing 20.94%, the huge deduction in goodwill and intangible asset made the total net profit below 0, which is a financial catastrophe. The improper selection of valuation methods (based on income method and market method) leads to the unsatisfactory control effect of valuation risk and the lack of control effect of exchange rate risk, resulting in the goodwill impairment, which indicating that goodwill is overrated in overseas M&A, for if the future performance do not hit the target, the goodwill will be impaired, impacting the profitability as a whole [4].

On October 31th, 2018, China Literature Limited acquire New Classics Media for 15.5 billion according to the study of Ye [5]. Faced with such huge merger premium, two parties chose to form a wager agreement to restrict the minimum level of net profit of acquiree. If not meet, the compensation will be interfered. Unfortunately, for the subsequent 2 years, there is an 176 million and 151 million gap respectively between expected and actual net profit, triggering the wager agreement. Firstly, for the impact of gambling on performance path, the valuation of New Classics Media calculated by China Literature Limited was inappropriate, the indicators in the agreement are deficient in flexibility, thus the synergetic effect and the incentive effect are not generated. In addition, the wager agreement lacks preventing the risk of impairment of goodwill, while during the period there was a huge goodwill write-off. On top of that, the declaration of the wager agreement, profit warning of New Classics Media and the modification of the agreement all presented negative market reaction. Furthermore, the financial indicators after M&A all showed negative reaction [5].

On February 24th, 2021, Beijing Oriental Jicheng Co., Ltd.(OIMEC) merger Beijing Wanlihong Technology Co. , Ltd. for 3.8 billion yuan, 153.64% of its net asset value in accord with Jia's study in 2023 [6]. As the acquiree possesses a good brand reputation and stable customer base, the valuation used income method and the market method for comparative evaluation, in terms of assuming the high-tech enterprise still enjoying preferential policies and information security market will gradually exaggerate. In order to protect the interests of the acquirer, the two parties entered into a performance commitment to restrict the minimum threshold of net profit, but the commitment was stimulated though, the valuation was overestimated [6].

To sum up, the asymmetry of information and the impropriate evaluation method will cause the deviation between the real figure and the valuation results. Usually, the expected value will surpass the actual one, for the goodwill is intangible and difficult to estimate. Thus, ridiculous wrong valuation will lead to the high risk of the enterprises, valuation is also a significant determinant of M&A.

4. Cultural Difference

There is no denying that cultural difference has an essential effect of M&A, both positively and negatively. For one thing, as the difference in distance, belief and experience contributes to enhance the opportunity of mutual learning, improving the performance. If the complement in each other's advantages is realized, the diversity and the heterogeneity will benefit the companies, fortifying the effect of synergy. For another thing, the cultural distance may negatively hinder the understanding of core competitiveness, slowing the adaptation to the environment, which will reduce the efficiency of M&A parties to reach an agreement [8].

In 2019, Wuxi Little Swan Company Limited was officially merged by Midea Group Co., Ltd., during a long period of M&A. According to the research in 2018 of Siyuan Wang, before it was acquired, the challenge of integrate the culture between the two arouse attention. As Midea developed

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in the early market in Guangdong region, employee efficiency and contribution are attached great importance to its value. The emphasis on competition stimulated the sense of urgency and the feeling of pressure. However, Wuxi Little Swan located in the southern area of Jiangsu has a strong background and philosophy of state-owned enterprises, paying more attention to employees' sense of belongings. Moreover, the adjustment on institutional framework, leading personnel as well as rules and regulations made the acquiree company think the acquiring company is cleaning up his enemies, thus resulting the high quit rate. On top of that, for Wuxi Little Swan used to be state-owned, staff are used to a relatively fixed pattern, which increased the difficulty of change management. Although the synergetic effect was attained consequently, the process was incontrovertible suffering [9].

At the end of 2016, Midea Group Co., Ltd. also completed the M&A of KUKA. Based on Yaxing Cai's literature in 2023, as a cross-border M&A, the culture difference in China and Germany cause difficulty in transaction. Furthermore, Midea is a typical home appliance manufacturing enterprise whose products has low technical content and weak self-innovation, while as a company with high technology, KUKA has a complete product production chain and advanced industrial production automation technology. Yet, the M&A is conducive to the improvement of technological innovation ability on the whole. Typically, KUKA think highly of the intellectual property awareness and the uniqueness of brand position while Media not. When facing this huge difference between them, Media chose to maintain the independent brand status and signed the quarantine protocol, separating the information collection section. In addition, Media also respects KUKA's own administrative decisions and R&D input activities [10].

When it comes to the enterprises in the same industry but in different markets, according to the literature of Chao Liu et al., Geely Automobile Holdings merging Volvo Car AB will also arouse attention. Geely, as an old Chinese private automobile enterprise, initially implemented a low-price strategy to occupy the low-end market, lasting a profound impression in people. Whereas, Volvo is a luxury car brand in Sweden at opposite pole. Situated in different national cultural environments, the power distance, collectivism/individualism, uncertainty avoidance, short-term/long-term orientation and masculinity/femininity are quite different. And the enterprise culture in history development, market positioning and product orientation have discrepancy. According to related research if management grid theory, under the orientalism Geely emphasizes on contribution and exact demands, while Volvo used to be operated under Ford, deeply influenced by Western culture. There is a clear boundary between staff's work and lives and keep a watchful eye on the quality of life, pursuing personal value. Fortunately, Geely's management of Volvo is not a dingle control and repression, but retain autonomy in handling internal affairs. Additionally, not only they established a cooperative committee to communicate and share resources, but also hire a professional cultural integration team to train staff. The M&A make Gelly got rid of low-end image quickly and broke through key technical limitations, expanding domestic market share. On top of that, Volvo successfully achieved brand premium and laid a solid foundation of introducing Geely cars to international market [11].

To sum up, the cultural difference is vital in M&A, the acquisition in different regions as well as the differences in their own corporate culture increase the difficulty but also the opportunity in M&A.

5. Policy

The policy and attitude of the acquiring enterprise is also a crucial factor. For different target company in different regions with different strategies, the results may be different. In light of the literature of Song Gao in 2022, CITIC securities, as the largest enterprise in the securities industry, is seeking for mergers to fortify its leading status. Nearly 20 years ago, CITIC securities intended to merge GF securities mightily, but as the scale of GF was resemble to that of CITIC at that time and the consideration did not satisfy them, the internal staff including the management were unwilling to accept the occupational risks of integration, they unite the existing major shareholders to execute an

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anti-takeover strategy, result in the failure of the merger. However, after more than a decade, CITIC chose to merge an enterprise whose scale was much smaller called GZ securities, and the aim of this time is more concentrated and definitely, with a commitment to absorb all employees, CITIC merged GZ successfully [12]. For a competitor of comparable size, the mighty policy might stimulate the dissatisfaction of the target company. By contrast, to merge a smaller enterprise with mild method is easier to succeed.

6. Conclusion

In conclusion, the four determinants including synergy, valuation, cultural difference and policy contribute to the most effective factors for a successful M&A. The determinants meaning that the deviation in the condition during the M&A, the ultimate consequence will be different though. Initially, the successful M&A rely on the accuracy of the valuation, for the overestimates of acquiree's authentic value may result in high risks for the both. Subsequently in the acquisition process, whether the synergic effect would be realized plays a vital role in M&A, and this will also be a significant motive to the M&A. Additionally, to integrate resources in different culture can be challenging and different policies to acquire will cause different outcomes. Those four factors above lay the solid foundation to a successful M&A. There are still some other determinants that will influence the outcomes like preferential legal policies, stakeholders' comments, cashflow and so on.

In fact, M&A has been an extremely important means of enterprise expansion, and this method is an essential decision-making fashion for the preceding determinants and for other elements. The enterprises used to prefer to expand the market or the scale in the industry by vertical M&A and horizonal M&A, but nowadays they tend to make a technical acquisition. After absorbing and transforming them into internal skills, the efficiency of work might be doubled. No matter what kind of acquisition, various determinants push the enterprises considering their own positions with manifold factors to achieve the desired effect of M&A, the technical acquisition will be a trend.

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Analysis of Lululemon's Social Media Marketing Strategies

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Abstract: Lululemon, a prominent athletic apparel brand, has established a formidable marketing strategy that blends product innovation, community engagement, and digital integration to create a strong brand identity and loyal customer base. By targeting the high-end sportswear market and cultivating a strong brand image, Lululemon has garnered favor among upscale consumers and positioned itself as a promoter of healthy lifestyles. However, despite its considerable achievements, Lululemon faces challenges, including the need for continuous innovation to meet emerging consumer demands and the imperative to enhance data privacy protections in the face of growing concerns. This essay mainly studies Lululemon's marketing strategy and reveals insights into how a brand can successfully create and maintain a loyal customer base. The methods in this essay are collecting the materials on the Lululemon official website, and observing its presence on social media. By analyzing Lululemon's approach, marketers can learn valuable lessons on the importance of authenticity, community-building, and experiential marketing in building a successful and enduring brand.

Keywords: Lululemon, social media, marketing strategy, financial data

1. Introduction

Lululemon Athletica Inc., a sportswear brand has taken its rise in Canada, since Chip Wilson founded it in Vancouver, and it had become one of the top leaders in the global high-end sportswear market. Lululemon started with yoga costumes, it not only made breakthroughs continuously on the design of products and technological innovations but also demonstrated its unique charm in social media marketing strategies. This article is going to analyze Lululemon’s social media marketing strategy and discuss how it establishes strong brand influence and attracts a large number of loyal consumers on social media through community marketing and brand positioning strategies.

Lululemon’s success is not only reflected in its impressive financial statements, but also in its adherence to and dissemination of brand concepts. It not only sells products, but also promotes a healthy lifestyle and generates impacts on consumers’ daily lives through holding activities such as yoga courses and running clubs. On social media, Lululemon successfully spread its brand story and

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concepts to a wide range of people through establishing communities, interacting with consumers, and collaborating with brand ambassadors.

Although Lululemon has achieved considerable results on social media, its strategies still contain some potential drawbacks and challenges. A good example is, it started with women's yoga clothes, so it may be considered a women's brand by the public which will make it meet obstacles when promoting its products in the male's market. Besides this, the limitations of community marketing and the potential negative impacts that social media marketing may bring are also issues that brands need to face.

This article concludes Lululemon's brand background, growth, status, both positive and negative analysis of its social media marketing strategy, suggestions, and conclusion through reviewing and summarizing previous literature to demonstrate how this brand maintains its brand vitality and attractiveness in the era of social media. Through the research of Lululemon, this essay can develop a keen insight into the importance of social media marketing in today's business environment, and also the effective measures to build up brand image and the deepest connections with consumers via using social media platforms.

2. Brand Introduction

2.1. Establishment

Lululemon Athletica Inc.(Lululemon)is a Canadian sportswear brand established by Chip Wilson in 1998 in Vancouver. At first, it focused on designing and producing yoga clothes to provide those who love yoga with professional yoga equipment of high quality [1].

2.2. Development

Once Lululemon had been established, it developed at an unprecedented rate. It started to set up retail stores and expanded its market to America and Australia step by step. In 2007, the company successfully went public on NASDAQ in the United States, which accelerated its expanding to the whole world. With the development of various consumer groups' needs, Lululemon has started to extend from single yoga outfits to other sports apparel fields, including clothing for running, training, and other fitness activities. In addition, the company has also started launching men's sports series to meet a wider range of consumer needs.

2.3. Technological Innovations

Lululemon is known for its innovative fabrics and design. The company invested a great amount of resources in product development and invented a series of patent technology fabrics such as Luon® and Luxtreme®, which possess features such as breathable, moisture absorbing, and antibacterial which won consumers' preferences.

2.4. Status

Recently, despite global economic fluctuations, Lululemon still shows strong economic growth. The company's sales volume increased sustainably through online and retail stores around the world, especially in North American and Asian markets. Nowadays, Lululemon plays an important role in the high-end sportswear market and is favored by consumers with high purchasing power for its quality and brand image. Besides selling products, Lululemon also insists on promoting a healthy life style through holding marketing activities such as yoga classes and running clubs and building up communities at the same time to strengthen communication with consumers [1,2].

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3. Main Positive Social Media Marketing Strategies

3.1. Differentiate Brand Story and Theme

Lululemon's social marketing strategy starts with creating a brand story and philosophy that attracts potential customers to form a community. The brand concept is a set of values recognized by society that reflects the enterprise's personality, promotes its long-term development, and demonstrates the business consciousness of the entire enterprise. A brand story is an essential part of the development process that reflects the brand concept, enhances its history and seniority, and deepens consumers' understanding of the brand [3]. Unlike other brands such as Nike and Adidas, Lululemon has positioned its brand on yoga, which has given it a foothold in the market and paved the way for innovative marketing strategies.

Lululemon has developed its brand from multiple perspectives. The brand's theme is to provide high-quality professional yoga equipment to yoga enthusiasts. They have built a deeper brand and product philosophy that aims to help individuals discover their potential and become better versions of themselves. This philosophy is reflected in their product designs with the slogan, "when you feel your best, you perform your best" [4]. Lululemon continues to pursue this concept, which has attracted a large number of customers and optimized its positioning, laying the foundation for later community building. With a unique brand concept and a significant customer base, Lululemon has set out to turn its idea into a reality.

3.2. Construction of Community

Lululemon's main focus of community construction is on building offline stores. To achieve this, they started by adding a layer of concept to it. In 2000, Lululemon opened its first offline store and introduced the concept of an "interactive design lab". The store's employees were referred to as "product educators" or KOCs. Lululemon had specific criteria for selecting these employees. They wanted to find people with an educational background, a passion for sports, and a belief in the brand's philosophy. These product educators were responsible for promoting the products and acting as brand ambassadors. When the first store was built, founder Chip Wilson proposed that it should also serve as a yoga studio. This idea came about because his yoga teacher, Fiona, was the only yoga teacher in town at that time, and she did not have a suitable venue to teach. As more people began to visit the store and practice yoga, a community began to form around Lululemon [5].

Lululemon's brand ambassadors played a significant role in the company's growth. The brand sought out ambassadors who were distinct from other brands, they chose to partner with yoga instructors, fitness instructors, and athletes from across the globe to form a new team of key opinion leaders (KOL) [4]. The team was divided into three types of ambassadors, namely "elite ambassadors", in order to achieve low cost and high returns, and to generate a lot of traffic for the brand. This helped customers understand Lululemon's brand philosophy and product design under the guidance of product educators. As a result, the brand built high-quality links with customers rather than treating them as ordinary consumers [6]. After setting up various "roles", Lululemon began implementing its plan. The product educator would introduce the product to the customer and explain the meaning behind it, making a lasting impression on the customer. Working with the brand ambassador, they would provide the customer with additional services to enhance their experience.

3.3. Community Activities

After forming a community, Lululemon conducts various activities to retain customers and increase purchase and repurchase rates. The brand has launched several large-scale offline events to promote the concept of sports and encourage a healthy lifestyle. For instance, public yoga classes in parks,

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“Hot Sweat" festivals in London, and theme activities like "being in a good state together" with brand ambassadors on "World Mental Health Day." These events have expanded Lululemon's brand awareness and increased its influence through partnerships with yoga studios and gyms in different regions. The community formed by the brand's offline stores has played a central role in reaching the closed loop of marketing, which involves drainage, experience, and purchase. As a result, the number of offline stores has increased, and Lululemon has successfully expanded into the domestic and overseas markets, becoming a leading brand for the next generation of sports fashion.

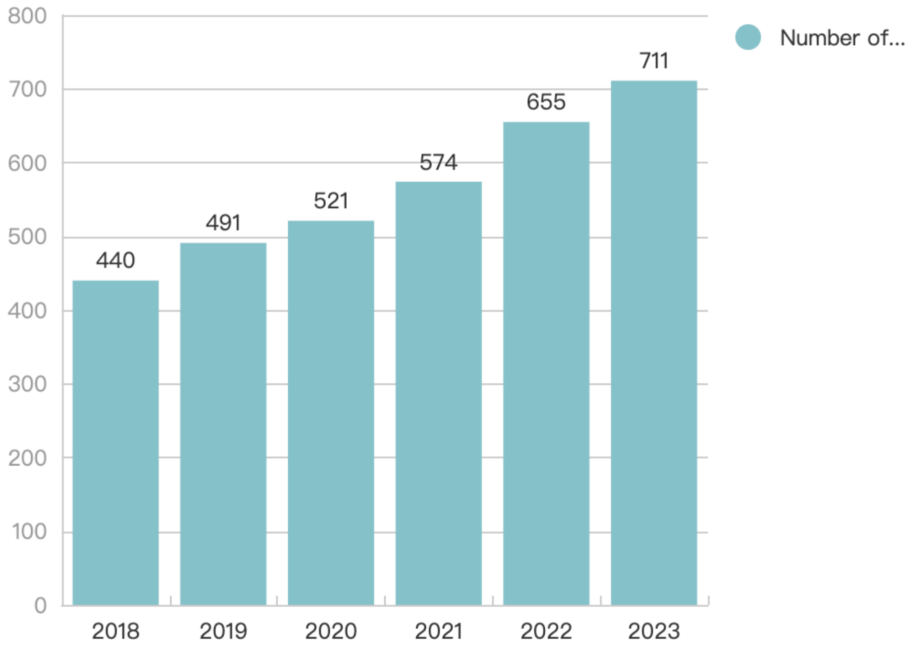

Figure 1: Number of Lululemon stores worldwide from 2018 to 2023 [7]

As shown in figure 1, the number of stores are kept rising for the past six years, the influential impact of Lululemon and it is community keeps growth and become a crucial force for new fashion that cannot be ignored.

3.4. Brand Positioning

Lululemon's brand positioning is centered around the word "vision". Their vision is to create transformative products and experiences that enable customers to build meaningful connections, leading to greater well-being and endless possibilities [4]. This aligns with their goal of becoming a "functional fashion brand". Despite being a premium brand, Lululemon has managed to build a loyal customer base and continues to expand. Their brand positioning accurately captures the consumption psychology of customers, enabling them to tap into more potential customers.

Lululemon's audience has grown over time, and as a result, the brand has expanded its product range to fit with a more diverse audience. This includes sportswear for men and products that are not restricted to a particular age group like "super girl". During the marketing process, Lululemon emphasizes its brand personality and intention by creating a deep meaning behind its products in three dimensions: physical, mental, and social. For instance, the physical dimension means "I am able to give my body what it needs for health and quality of life" [8]. This approach enables customers to focus on the brand's values and philosophy rather than just the price tag.

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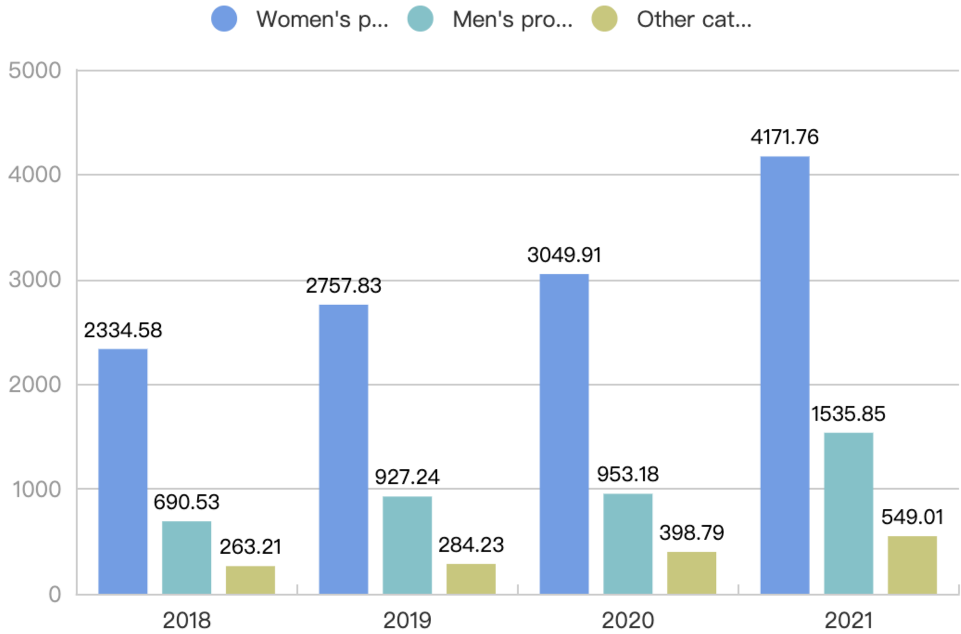

Figure 2: Lululemon Demographic Segmentation [7]

As shown in figure 2, the differentiation of products category enhanced for the past four years from 2018 to 2021, which shows the change in the diversity of the products and may become the mainstream for the future brand development.

3.5. Social Strategies

In 2009, Lululemon started preparing for direct-to-consumer (DTC) e-commerce by opening their official website for sales. DTC refers to selling products directly to customers without involving any middlemen like retailers, wholesalers [9]. This model allowed Lululemon to interact with their customers more easily. They started offering online services like online product educators, online communities, and online shopping experiences. This helped Lululemon expand their market more quickly and conveniently. As a result, their brand revenue increased significantly. Currently, they are serving customers in 82 countries across Africa, Asia Pacific, Europe, North America, South America, and the Middle East. According to the data, DTC sales made up just over half of the total, while the company's physical stores generated less than 40 percent of the revenue [7].

In order to improve online services, Lululemonhas turned their way to social media platforms for marketing. The first step is to encourage their customers to post about their experiences using their products and recommend them on platforms such as Instagram and Twitter. It is reported that they have 3.8 million Instagram followers and 990,000 Twitter followers, making it an excellent opportunity for Lululemon to build brand momentum and expand their community to enhance customers' sense of belonging, ultimately leading to increased sales [7]. The second step is to use Influencer Marketing to build awareness on social platforms. This strategy involves partnering with social media influencers, yoga instructors, and fitness instructors, who can promote Lululemon's products to their followers. Influencer marketing is a collaboration between popular social-media users and brands to promote brands' products or services [9]. In exchange, Lululemon provides them with brand benefits such as clothes or membership cards, and ask them to help spread the word. Since

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these people are influencial on the social media platform, more people will come and establish connections with the brand, and help existing customers solidify brand loyalty [10].

4. Main Negative Social Media Marketing Strategies

First of all, Lululemon is a brand made for yoga, which is typically a sport for women, so the public might think of Lululemon to be as a female brand rather than a male brand. Therefore, Lululemon notice the problem and increase the awareness for men by making lots of clothing for men [2]. Regardless of Lululemon is for women or men, its main strategies is community marketing and social media marketing.

4.1. Community Marketing Weaknesses

One major weakness for community marketing is the limited reach to customers. Community marketing will target on a specific type of customers. Although community marketing can build up strong bonds with their customers, it may restrict the possible growth. Lululemon was a clothing brand targeting mostly women, and men are more likely not be interested in this brand, which loses a lot of customers. When buying clothes, women consider their preferences, which is they can buy the clothing online or go to a physical store. However, for most women, they prefer to buy clothing online rather than going to a mall [11]. Therefore, these preferences will be a problem for community marketing because their customers could not even attend their activities.

4.2. Social Media Marketing Side Effect

One side effect made by social media is the negative impact on mental health. Persistently being exposed to staged, frequently idealized portrayals of other people's life can cause anxiety, sadness, and unhappiness. Negative emotions can be exacerbated by social media marketing that promotes an ideal lifestyle or image, particularly in sensitive populations like teens and young adults. While building on a customer group can build a strong relationship with the customers, it may cause customers' information disclosure. As targeted advertising grows increasingly invasive and individualized, giving users a feeling of being watched and having their privacy invaded, social media marketing may make these worries worse [12].

5. Suggestions

5.1. Improve the Brand Image

In the apparel industry, in the case of acquiring the same customers, the digital market cost of the social plan is much smaller than that of the display plan and search plan. Therefore, Lululemon should spend more budget and energy on social media advertising. For example, on Instagram, WeChat, TikTok, and other platforms, Lululemon is supposed to pose more attractive advertisements. Moreover, the company needs to improve the WeChat Mini Program. In this way, Lululemon can get more sales at a lower cost.

Table 1: Lululemon Finance [13]

	2024/1/31	2023/1/31	2022/1/31	2021/1/31
Revenue	$9,619,278	$8,110,518	$6,256,617	$4,401,879

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Table 1: (continued).

Revenue Growth	19%	30%	42%	
COGS	$4,009,873	$3,618,178	$2,648,052	$1,937,888
Gross Profit	$5,609,405	$4,492,340	$3,608,565	$2,463,991
Gross Profit Margin	58%	55%	58%	56%

As shown in Table 1, the profitability of Lululemon is slowing up. In the past few years, Lululemon has appeared in the market and started quickly, it attracted a large number of sports enthusiasts. In recent years, due to the brand premium and increase in substitutions, although the company operation is relatively stable, Lululemon is suffering from a decline in growth rate. Under Armour, Alo, Adidas, NIKE, as the competitors of Lululemon in the market, affect the revenue of Lululemon all the time, because they are in a monopolistic competition market structure [14]. At the same time, the emergence of short videos makes more niche brands appear in the public vision. Many private yoga and sports companies, with lower prices and excellent quality, have also been recognized by many middle class and seized the market. Faced with the increasingly competitive market, Lululemon can use some innovative strategies. As a high-end yoga brand in the market, it is not reasonable for Lululemon to sharply drop in price. Accordingly, it can cooperate with competitors or co-name with some popular brands and IP [2]. As a yoga brand, Lululemon gives people the impression that it serves women doing yoga. However, Lululemon can also be used for all kinds of sports, such as swimming, running, fitness, etc. Furthermore, it can also serve for men [2]. Cooperation with other brands can help Lululemon shake off this stereotype and increase sales, which is a win-win marketing strategy.

At the same time, the community marketing that Lululemon is implementing can be further deepened [2]. It can find some sports leaders in the communities to promote the brand. Additionally, Lululemon can also find some popular celebrities or influencers to promote the brand online and in daily life. In this way, when their fans see that their idols are in favor of the brand, they will be also willing to pay for it, to follow their idols, which will increase the overall sales of Lululemon. In addition, Lululemon can also co-name with some brands. For example, Lululemon is cooperating with many universities uniforms, so it can co-name with more schools. Its comfortable suits, with represented colors and patterns of each school, will be beneficial to both students and Lululemon. What is more, its simple and comfortable style is suitable for cooperating with Calvin Klein, alexandrine and so on.

According to the general trend, the target customers of Lululemon will be wider and the products will be more diverse. It will break down its stereotype----a yoga brand for women, and be famous as a sports brand serving all who enjoy life. Simple and comfortable backpacks, sneakers, cups and more, all kinds of products are helping Lululemon transform into a more comprehensive brand.

5.2. Strengthen the Confidentiality of Customer Privacy

Lululemon needs to address the problems of data leakage and the abuse of personal information as mentioned before. Lululemon shall strictly manage users' data, provide security protection for the network information system, and immediately remedy the data leakage once it is discovered. In addition, the relevant departments of the brand need to check whether any employees provide data to the outside, and formulate relevant regulations. Regarding the rights and interests of customers, brands should pay attention to prevent harassing calls from interfering with customers' lives. Therefore, brands are responsible for the management of customers' personal information. For the abuse of personal information, social media should provide appropriate targeted advertising, so that it is not obtrusively embedded in customers' lives. Also, Lululemon should control its advertising amount to avoid customers' aversion caused by excessive advertising.

6. Conclusion

From the analysis above, it is evident that Lululemon Athletica Inc., as a Canadian sports brand, has achieved significant development since its establishment. Its success is attributed to its continuous innovation in technology, precise market positioning, and positive social influence. Firstly, in terms of technological innovation, Lululemon is dedicated to developing high-quality sports fabrics with moisture-wicking, breathability, and antibacterial properties, aiming to provide more comfortable and practical sportswear. By consistently investing in product research and development, the company has strengthened its leading position in the sportswear industry. Secondly, regarding market positioning, Lululemon has targeted the high-end sportswear market and garnered favor from high-end consumers through brand image cultivation and precise target customer identification. Furthermore, through marketing activities and community engagement, Lululemon has not only established itself as a sportswear brand but also as an advocate for a healthy lifestyle, solidifying its brand position. However, despite Lululemon's remarkable achievements, it still faces challenges. With market competition intensifying, the brand needs to continuously innovate and improve to meet the evolving needs of consumers. Additionally, as data privacy concerns escalate, Lululemon must enhance the protection of user data to maintain consumer trust and brand reputation. Therefore, to sustain its competitive advantage and achieve sustainable development, Lululemon must remain committed to technological innovation, precise market positioning, and social responsibility. By continuously enhancing product quality and user experience, the brand can broaden its market recognition and consumer trust. From the analysis above, it is evident that Lululemon Athletica Inc., as a Canadian sports brand, has achieved significant development since its establishment. Its success is attributed to its continuous innovation in technology, precise market positioning, and positive social influence.

The results of this study help Lululemon refine its brand image and promote brand development from a long-term perspective. It also aids consumers in understanding the brand's values and enhancing brand loyalty. The research method is to review and summarize literature. However, this study has certain limitations, such as the constraints of the sample data, which may affect the generalizability of the results. Future research can further explore the impact of different market environments on brand development and the insights consumer behavior changes provide for brand strategy.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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The Influence of ESG Factors on the Firm Performance

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Abstract: In the face of escalating global environmental crises, governments worldwide are heightening their expectations for corporate social responsibility, urging businesses to adopt eco-friendly production practices. Consequently, the emergent Environmental, Social, and Governance (ESG) rating system has garnered increasing significance within corporate annual reports. This article undertakes a comprehensive review of prior research examining the correlation between ESG performance and corporate performance. Existing studies have consistently demonstrated the substantial positive impact of ESG performance on enterprises, particularly in terms of bolstering risk management practices and meeting investor expectations. However, there is also evidence indicating a nuanced negative effect on small and medium-sized enterprises (SMEs) due to associated costs. Drawing from a synthesis of these previous findings, this paper delves deeper into the intricacies of this relationship, considering additional factors encompassing management strategies, economic dynamics, and beyond. By expanding our understanding of how ESG performance intersects with firm performance, this study seeks to offer valuable insights for businesses navigating the evolving landscape of corporate responsibility and sustainability.

Keywords: Environmental, Social, and Governance (ESG) Factors, Firm Performance, Small and Medium-Sized Enterprises (SMEs)

1. Introduction

The ESG evaluation system, also known as ESG rating, takes the environment, social responsibility and corporate governance as the core. In recent years, governments around the world have increasingly encouraged companies to disclose ESG reports in their year-end reports. Under such a policy orientation, ESG reports have gradually become a new focus of investors. Therefore, the link between a company's overall performance and its ESG performance has gradually strengthened.

According to the World Economic Forum's Global Risk Report 2022, 80% of the most serious risk types of enterprises worldwide in the next decade are highly correlated with ESG performance, which makes ESG performance gradually become an important factor affecting the financing cost of enterprises, and has attracted wide attention from external investors. In the future, both as individual investors and company management, they need to understand the principle of ESG rating system and its impact mechanism. Since the concept of ESG was put forward, many scholars have studied the relationship between ESG and corporate performance. The existing financing literature is mainly engaged in exploring the positive role of ESG performance in the later stage, some scholars also

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found that the implementation of ESG increases costs and reduces profits, which has a negative effect on debt financing costs to a certain extent [1].

In existing studies, although both positive and negative impacts of ESG are involved, most scholars study the direct relationship between ESG performance and enterprise performance, and use statistical methods to modeling calculation, without taking into account the mediating effects of management science and investment science, and lack in-depth analysis of each impact factor. The author notes that among the many influencing factors, ESG performance has the most positive impact on enterprise performance in terms of risk management and investor expectations, while it has some negative impact on cost input. Some papers also explain the logical relationship between enterprise performance and the above factors. Therefore, by studying the relationship between ESG performance and enterprise risk management and investor expectations, we can also look at its impact on enterprise performance from a new perspective.

This paper will focus on recent research reports on the relationship between ESG and firm performance, and provide a comprehensive analysis in terms of risk management, investor expectations, and a series of costs incurred by ESG. Through this paper, we hope to effectively summarize the research achievements of current scholars, and establish certain connections among the influencing factors involved in different literature, so that readers can better understand the series of impacts of ESG rating system on enterprises, and inspire future scholars to conduct research from different perspectives.

2. Risk Management

Enterprise risk refers to the uncertainty factors that can affect the realization of an enterprise's strategic objectives and business objectives, including policy risk, market risk, financial risk, business risk and so on. Mature enterprises often have a set of relatively fixed production and operation mode, and sufficient funds also make them more flexible in the face of market changes, so they face smaller business risks and market risks. However, in recent years, with the increasingly severe global climate problems, the laws and regulatory provisions of various governments have responded to this, making many mature enterprises face certain regulatory risks. At the same time, with the unprecedented increase in the transparency of corporate information and the public's expectation of corporate social responsibility in the Internet era, enterprises are facing greater reputational risks. Effective ESG management in corporate reporting can reduce the overall risk of the enterprise, especially in the face of less regulatory risk and reputational risk. For some developing enterprises, ESG performance is also closely related to systemic risk. Foreign studies have found that the impact of ESG performance on the overall performance of enterprises is heterogeneous. For high-risk companies, good ESG performance will reduce more systemic risks. For low-risk companies, more disclosure of ESG information will help reduce systemic risk [2]. It can be seen that investors and the government have higher requirements for ESG reporting of high-risk companies, and only when they show good performance can they reduce risks. For low-risk companies, presenting a clear and transparent ESG report can reduce systemic risk. At the same time, from a stakeholder perspective, good ESG performance helps reduce financial risk. First of all, enterprises promise to actively participate in the construction of the environment and fulfill their social responsibilities, abide by business ethics, and transmit friendly signals to the outside world, which is conducive to maintaining a good relationship with stakeholders, and easy access to customer resources and market information in operation, so as to reduce risks. Secondly, ESG reports further enhance the transparency of information [3]. Stakeholders can have a more comprehensive understanding of the situation of enterprises by viewing the information disclosed by enterprises, which reduces the situation of information asymmetry. On the one hand, it strengthens the regulatory efficiency of enterprises, timely standardizes and restrains the improper behaviors of enterprises, reduces the legal risks of enterprises, and on the other hand, improves the transparency of enterprises' operations. Make external investors and industry partners more confident in the company. At the same time, institutional investors themselves pay more attention to national policies and development directions, and rarely appear short-sighted. Therefore, the good ESG performance of enterprises will attract the interest of institutional investors and increase the shareholding proportion of institutional investors. Institutional investors often have the advantage of sufficient and stable funds, and the increase of their shareholding ratio makes the share structure of enterprises more stable. In addition, enterprises with good ESG performance are more popular in the talent market, and it is easier to recruit high-tech talents, improve the development potential of enterprises, and have a positive and negative effect on their ESG performance. Good ESG performance can not only reduce enterprise risks, but also establish brand image and accumulate reputation, transmit good signals to the outside world, and attract new partners and investment.

In recent years, the world's new energy vehicle technology has developed rapidly, the core of the development of new energy vehicle enterprises is technology, the industrial chain on the middle and downstream such as battery materials, battery manufacturing, electronic control motors, vehicle manufacturing, charging piles, etc., have high-tech, high input and high value-added characteristics, enterprise research and development momentum. Due to the environmental strategy introduced by the state in recent years, under the strong incentive of the market and relevant national policies, the power battery, electric driving force assembly and electronic control technology of new energy vehicles in China have made great progress, and are becoming more mature in environmental protection. At present, the state has introduced many policies to build China's ESG system, support enterprises to achieve green technology transformation, for those enterprises that actively fulfill social and environmental responsibilities, the government will give subsidies to them, provide tax incentives to facilitate enterprises to carry out deeper research and development innovation. The ESG performance of new energy vehicles is good, can fully enjoy the dividend of the policy, obtain large subsidies and good reputation, and effectively reduce the financial risk and reputation risk. In addition, the good performance of new energy vehicle ESG is more likely to attract high-quality technical personnel in the market, and high-quality human capital can promote the innovation progress of new energy vehicle enterprises, constantly upgrade product technology to reduce production costs, expand market share, and ultimately improve the competitiveness of enterprises [4]. Good ESG performance also brings other dividends to new energy vehicle companies. Traditional car companies often sell in fixed sales centers, while new energy vehicles, due to their good ESG performance and policy support, can often be advertised and sold in major indoor shopping malls, making their publicity more convenient. At the same time, the state often provides subsidies and benefits for consumers who buy new energy vehicles, indirectly helping new energy vehicle companies to attract customers.

On the other hand, because ESG rating is a relatively new concept and is contrary to the traditional profit maximization corporate goal, it may cause conflicts between shareholders and management in corporate strategic planning, and on the contrary, increase a series of risks of the company. The main business of an enterprise in China is new energy biomass power generation, wind power, hydropower, forestry, sideline for coal mining, with a number of new energy operating power plants in the country, new energy power plants under construction, as well as rich forest resources, there is an affiliated coal mining enterprises. Based on the proposal of China's "double carbon" goal and the maturity of ESG rating system, the enterprise ESG report was disclosed in front of the public. After considering that the company's main business is highly consistent with the national environmental protection policy, the management decided to integrate the ESG concept into the corporate development strategy. The company has set its own strategic goal of clean energy to become a leading enterprise. Under this corporate strategy background, managers and employees must have a strong sense of social responsibility, so that the content involved in the ESG rating system is highly consistent with the corporate strategy. However, profit is an important link to maintain the listed status of an enterprise and enhance its market value. In the aspect of corporate listing regulatory law, it emphasizes the profitability of listed enterprises, and if the enterprises start to improve ESG performance, on the one hand, the cost will be increased, and on the other hand, the profitable income of the sideline will be suppressed. At the same time, the background of shareholders of the enterprise is quite different, and the minority shareholders are mostly in the secondary market, which affects the operation and management decisions of the enterprise to a certain extent. Individual investors often have a certain short-sighted problem, and the shareholders of this company do not agree with the ESG concept under the profound influence of the traditional value maximization concept. From the perspective of the "dual carbon" goal, the enterprise needs to control coal mining and coal-fired power generation to achieve the goal of low carbon emissions [5]. When implementing the ESG concept development strategy, the company undoubtedly needs to transform coal-related industries, give up short-term economic profits, invest in research and development funds, and implement the transformation of coal-related industries. Not only that, in the early stage of industrial transformation, enterprises also need to invest a lot of money in research and development, and the research and development of new technologies often has greater risks, once the research and development fails, enterprises will lose a lot of time and funds. More conservative shareholders and individual investors tend to reject such behavior, so the pursuit of ESG performance may lead to conflicts of economic interests at multiple levels and increase risks [6].

3. Investor Expectation

Investor expectations refer to investors' views and expectations on the future development of the market. Investors' expectations are often based on the comprehensive analysis and judgment of many factors such as market economic environment, industry development trend and individual stock fundamentals. The accuracy and rationality of expectations play a crucial role in investors' investment decisions and investment strategies. Investors tend to pay attention to the company information of different enterprises when carrying out expectation management. The information of listed companies consists of financial information and non-financial information. In recent years, non-financial information such as corporate social responsibility and environmental performance has become an important channel for enterprises to transmit non-financial information to the public. When companies are unable to provide high-quality decision information for institutional investors, they can seek other relevant information to provide basis for investment decisions [7]. As a signal, corporate ESG performance conveys the performance of enterprises in environment, social responsibility and corporate governance to the public, and at the same time, corporate ESG performance also conveys risk signals. When ESG information meets the expectations of institutional investors, it can reduce the possibility of implicit or explicit costs and reduce the investment risks of institutional investors [8]. As a result, investors tend to pay more attention to ESG performance reports when comparing different companies with similar financial information. Investors tend to bet more money on companies with better ESG performance. At the same time, investor expectations can be divided into short-term expectations and long-term expectations. Short-term expectations are mainly concerned with market fluctuations and changes in the market, while long-term expectations are more concerned with the analysis of factors such as macroeconomic, industry development and corporate fundamentals. In terms of the larger market share of new energy vehicles and the environmental policies introduced by governments, both short-term and long-term expectations cannot be avoided from the concern about corporate ESG performance.

More and more newly introduced environmental regulations will increase the uncertainty of the business environment of enterprises. Green financial institutions emerging in recent years may pay more attention to the environmental risks and ESG performance of enterprises, and incorporate these factors into the assessment model of enterprise credit risk, so as to better assess the credit risk of

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enterprises [9]. Companies with better ESG performance tend to have lower credit risk and thus lower funding costs. At the same time, the results of the above risk assessment will also guide the flow of capital in the market, so that more funds will flow to enterprises with good ESG performance.

In recent years, many Chinese commercial banks have strengthened the construction of ESG evaluation index system, set up ESG information database, and actively created a lot of rich financial products. These phenomena further lead small and medium-sized investors to put forward higher expectations for the ESG performance of listed companies.

4. Cost-Efficiency

First of all, the development and application of ESG scoring system will put forward higher requirements for the operation and management of enterprises. High ESG performance may require companies to bear more costs and risks, and these additional costs and risks may lead to the decline of the company's profit margin. Individual investors are short-sighted, which could lead to stock price declines. On the other hand, for the sake of their own interests, enterprise managers may ignore ESG investment and improvement in order to achieve some short-term financial goals, resulting in a decline in ESG performance, which violates the expectations of institutional investors and again affects the performance of stock prices. To make matters worse, investors may face information asymmetry when buying corporate shares. If investors do not have enough information to evaluate the true ESG performance of enterprises, they will overestimate the value of these enterprises, causing the stock price to exceed its true value, and giving the managers of the company sufficient incentive to continue to conceal the true information of the company. If ignoring ESG performance does not result in a loss, then managers will continue to misestimate the important role of ESG performance when considering the high costs of ESG. When real ESG ratings are exposed, investors may lose confidence in these companies, leading to a decline in stock prices [10].

Because enterprise managers previously ignored the serious consequences that may be caused by concealing ESG performance, they did not expect and prepare for the stock price decline caused by it, which made the stock price crisis more difficult to deal with and even affected enterprise operation. Other scholars also believe that investors pay more attention to financial indicators when making investments, and ESG evaluation is only a part of the evaluation factor. Implementing ESG and reducing profitability will also make enterprise operators bear too much risk and responsibility. This is the negative offsetting effect that ESG can have on firm performance.

The implementation of ESG requires a large amount of investment to improve the ESG rating level, but investment in research and development has risks. Once the research and development of green products fails or the capital is occupied for too long, the enterprise's circulation is not smooth, which may cause the enterprise to fall into a crisis. Different opinions on the implementation of ESG within enterprises are likely to intensify conflicts between professional managers and enterprise owners [11].

For example, in the third quarter of 2023, the research and development costs of listed green building companies are a large amount of expenditure, and the green research and development costs of China's construction reached 27.758 billion yuan in this quarter, while Shanghai Construction Engineering, ranked second, also invested 7.256 billion yuan. It can be seen that in terms of cost, the pursuit of good ESG performance may make some cash-strapped enterprises face a greater crisis, and even increase the financing cost of equity and debt.

5. Conclusion

In general, ESG rating plays a positive role for enterprises, which is reflected in reducing financial risk, regulatory risk and reputation risk, meeting investors' expectations, and reducing equity financing costs and debt financing costs. Nowadays, with the global warming, resource shortage and other problems become increasingly serious, governments of all countries pay more and more attention to the concept of environmental protection. Companies face government regulation and public expectations of environmental responsibility. Only by showing good ESG performance can enterprises reduce regulatory risks and reputational risks. At the same time, with the maturity of the securities market, the participation of institutional investors is getting higher and higher. Since institutional investors are less short-sighted and highly focused on national policies, companies with high ESG performance are more likely to meet their expectations. At the same time, the development of the Internet has made corporate information more open and transparent, and individual investors have certain standards for corporate social responsibility and environmental protection performance. Therefore, only by continuously improving their ESG performance can enterprises absorb more funds in the securities market. However, there is a certain heterogeneity in the positive effect of ESG performance. The effect of ESG is more obvious for enterprises with larger scale and more sufficient capital, while the effect is not particularly significant for small enterprises. Therefore, enterprises should make rational decisions according to their own development strategy and market positioning, and should not blindly pursue ESG performance while ignoring their own profit attributes. At the same time, the ESG rating system has the characteristics of high requirements and comprehensiveness. If companies want to improve their ESG performance, they need to increase their R&D spending on environmental governance and increase their spending on social responsibility. If the company's own funds are insufficient or the research and development results are not consistent with expectations, it may cause negative offset to the performance of the company, triggering a series of chain reactions. Therefore, while responding to the policy call, enterprises should also prudently treat their own strategic planning, fully consider the benefits and costs brought by high ESG performance, and weigh them. At the same time, the whole society should actively advocate the concept of ESG sustainable development, especially the concept of green development, lead financial consumers to actively practice the concept of ESG, obtain investment returns while achieving environmental and social benefits, and promote commercial banks and other financial institutions and influential enterprises to face up to their responsibilities.

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Using Marketing Mix Theory to Analyze the Successful Reasons on Heytea' s Co-branding Strategy

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Abstract: Since May 2023, when Heytea established a co-branding alliance with Fendi, its sales and popularity have significantly increased. Several retailers faced a shortage of the product within the first week following its launch. This study sought to examine the elements that have contributed to the successful cross-border co-branding cooperation between Heytea and Fendi. This study employs the marketing mix theory of the 4Vs to analyze the situation of Heytea from three angles: value strategy, variation strategy, and vibration strategy. Heytea had success by using three crucial factors: augmenting the perceived worth of their product, providing a wide array of products to cater to a broader consumer demographic, and producing enthusiasm to captivate public attention. Similarly, the three suggestions are to improve the caliber of products, provide customized service, and engage influencers. This study offers an extensive investigation into cross-border co-branding in China, with significant implications for other companies and industries.

Keywords: Value strategy, Variation strategy, Vibration strategy, Co-branding

1. Introduction

Since the pandemic outbreak, consumers' health concerns for food and drinks have increased. With the development of the beverage market segment and the improvement of consumers' health awareness, sugar-free tea drinks with tags of "healthy," "fresh food," and "0 sugar" have become mainstream in the beverage market [1]. Heytea is one of those brands that produces healthy, hand-made fruit tea and milk tea. As demand increases, more and more producers join the market, creating various brands and fierce competition. To increase competitiveness and raise public awareness to increase profits, co-branding became a popular strategy. With this policy, Heytea was the most representative brand. In 2023, Heytea started its first try at co-branding with the luxury brand Fendi. Three days after the product's release, Heytea sold more than 1.5 million cups, demonstrating the great success of the co-branding [1].

Research on the beverage industry's co-branding strategy, particularly Heytea, has a long history. Yang studies the Internet spread of the co-branding of Heytea and Fendi, using the Internet symbolic consumerism approach [2]. The theme analysis investigates the stage characteristics and deep connotation of luxury brand co-branding in relation to communication on social media platforms [2]. Using the two-axis semiotics theory, Gao investigates the co-branding packing design strategy [3]. Zhang studies Heytea's co-branding strategy using content analysis and in-depth interviews [4]. Research on the joint marketing of Heytea was carried out [4].

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Most previous studies focused primarily on a specific aspect—Internet marketing strategy, packaging, or holistic strategy for the past decade—to analyze co-branding. Until now, no previous research has thoroughly investigated Heytea co-branding with Fendi, which is the most significant cross-boundary co-branding case. This study aims to address this gap by primarily examining the co-branding strategy of beverage brands collaborating with luxury brands, conducting a thorough and comprehensive analysis of the Heytea and Fendi cases, and utilizing quantitative methods to determine the factors contributing to their success. One might formulate the research question as follows: What are the reasons for Heytea and Fendi's cross-border co-branding success? This study aims to make a deep-down analysis of the cross-border success of hand-made beverage brands (Heytea) with luxury brands (Fendi) and give possible suggestions for the next steps of Heytea and Fendi. Other similar brands can assemble this case for higher revenue and popularity, and further apply it to other fast-moving consumer goods (FMCGs), thanks to the wide applicability of the contributions made here.

This study will utilize Heytea's case study to examine the co-branding process, encompassing the case description, problem analysis, and recommendations. This paper will provide an introduction to the co-branding case between Heytea and Fendi, as well as an analysis of the issues associated with this case. Subsequently, theories, statistics, and calculations will be utilized to scrutinize the factors contributing to the achievement. Ultimately, based on the study of success, recommendations will be provided sequentially.

2. Case Description

Heytea is a popular beverage brand in China. It originated in Guangdong, China, in 2012. The company will be one of the top ten brands in China's food and drink industry from 2021 to 2023. It has received at least 4 billion RMB of investment from Tencent Investment, Sequoia Capital China, Hillhouse Capital, Temasek, IDG Capital, Meituan, and other institutions. By March 2024, Heytea will have 3,025 stores in operation, while 200 stores will have been closed. Stores have a survival rate of 94% [5].

Heytea has completed about 110 joints in total, and the category of co-branding is abundant (as shown in Table 1) [6]. In June of 2017, Heytea started its first joint venture with Maybelline and accomplished three co-branding collaborations in the rest of the year [6]. In 2018, the second year of co-branding, the brand finished 11 joints, while in 2019, the frequency boomed to 26 times [6]. By June 2020, the number of joint names completed by HeyTea will be approximately the sum of its two main competitors, Nayuki Tea and Lele Tea [6]. Later on, HeyTea fixed the frequency of co-branding at about 20 times a year [6].

Table 1: Category of co-branding of Heytea [6].

Co-branded category	Number of joint names
IP (films and television, games, etc.)	14
Food	12
Drinks (including wines)	12
Catering	11
Makeup (skincare, cosmetics)	9

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Table 1: (continued).

Co-branded category	Number of joint names
Celebrity	6
Website	6
Fashion brand	5
Costume	5
Large-scale activity (exhibition, music festival)	5
Shop (supermarket, club)	4
Cultural and Creative Industries	4
Cup	3
Luxury	1
Others	14

(Data source: https://www.21jingji.com)

Heytea is not the first drink brand to join luxury brands. Louis Vuitton and Manner Coffee co-branded in 2022, but the results were not promising. Manner didn't get authorization for the classic color and pattern of Louis Vuitton, and the logo of LV wasn't signally displayed on the cup. Additionally, the limited drinks are only available in a few designated stores. Due to the marketing strategy of getting free Louis Vuitton canvas bags only for consuming expensive Manner hardcovers, the doubts on the internet about the canvas bags are drastic, shifting public attention to Manner's original joint product—coffee. Eventually, the flash mob prematurely terminated.

Heytea learned from the collaboration between Manner and LV, using the symbolic color of Fendi—bright right—and the brand logo on the cup and related products, and expanding the scope of cooperation to nationwide stores [7].

The co-branding turns out to be a great success. More than 1.5 million cups sold in the first three days of the product release [1]. Additionally, the collaboration drew a lot of attention from society. When launched, the tag #Heytea x Fendi was on the top search of the Weibo social hot list, the Tiktok brand list, and the small red book hot creation list. The collaboration generated more than 100 million UGCs [1].

3. Analysis

3.1. Marketing Mix Theory

Marketing mix theory includes multiple variables of focus as part of a comprehensive marketing plan [8]. It was first developed by Neil Borden in 1949, suggesting that when constructing advertising and marketing software to meet the wishes of his firm, the advertising and marketing supervisor has to weigh the behavioral forces, after which he juggles advertising and marketing factors in his blend with an eager eye at the assets with which he has to work [9]. The marketing mix theory of 4Vs includes four core components: value, variation, versatility, and vibration.

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Value refers back to the advantages that a consumer perceives they acquire while purchasing a product or service [8]. It represents prices, quality, convenience, and the overall consumer experience [8]. It emphasizes the importance of producing according to consumers' needs and preferences [8].

Variation refers to the range of data types and sources available to marketers [8]. Customers interact with brands across multiple platforms and applications, which provides marketers with diverse data to refer to [8]. It also represents the range of products and services a brand provides to meet diversified customer needs and stay competitive [8]. It emphasizes the importance of offering various options to meet the different needs and preferences of consumers and attract more [8].

Versatility focuses on the flexibility and adaptability of marketing strategies and offerings [8]. It involves a product design strategy to serve multiple purposes or address diversified consumer needs [11].

Finally, vibration could represent the dynamic and interactive nature of marketing efforts [10]. It refers to the ability of a marketing strategy to interact with consumers and thus stimulate the desire to purchase, such as by creating excitement, engagement, or emotional resonance [8]. Vibration could imply the impact, or "vibrancy," that marketing campaigns have on target audiences [8].

This theory is usually employed in market segmentation research, investigating the diversity or variability of consumer preferences, behaviors, or market conditions, determining product design and pricing strategies, considering the psychological impact of marketing campaigns, and analyzing how vibrations in consumer attitudes and behaviors influence purchasing decisions.

3.2. Reasons on Value Strategy

A successful value strategy contributes to the success of co-branding. By co-branding with Fendi, Heytea elevated its brand perception among consumers, positioning itself as a premium and fashionable beverage option. Inspired by FENDI's classic "FF logo," the logo was modified to the inverted "double happiness (Xi) "and engraved on the badge. Simultaneously, they selected the representative category of FENDI bags and incorporated black leather into the coasters. A series of limited product designs not only highlights the texture and tonality of FENDI but also injects fashion and fresh vitality into the happy tea, establishing a high degree of recognition in the hearts of consumers. As luxury goods are famous and valuable for their classic design, especially their logos, this co-branding undoubtedly increases the perceived value of this product. For the younger consumer group, although for most of them, luxurious goods are unaffordable, the desire for luxury goods and the awe of luxury brands are relatively high. On FENDI's official website, the minimum price for a handbag is more than 10,000 yuan; a T-shirt is five or six thousand yuan; and the cheapest ring is more than 2,000 yuan. During the event, one cup of "FENDI Joy Yellow" costs only 19 yuan [9]. Customers who purchase two cups will receive a joint badge or coaster, along with a specially designed FENDI bag for the joint event [9]. The collaboration added perceived value to Heytea's offerings, making them more desirable and exclusive. Consumers were willing to pay a premium price for the co-branded products due to the perceived luxury and quality associated with Fendi.

Previous research conducted by Feng et al. hves demonstrated that aligning prices with the consumer's perceived value can lead to an increase in consumer surplus, hence stimulating demand [10]. This finding was supported by a logical model [10]. Furthermore, Yu confirms that incorporating a logo onto the goods can enhance buyers' desire for them [11].

3.3. Reasons on Variation Strategy

An effective variation approach is also essential for success in the co-branding instance. In the instance of Heytea and Fendi's co-branding cooperation, the "variation" element was critical in

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drawing a larger client base and increasing the overall appeal of Heytea and Fendi's co-branding collaboration.

Firstly, in this co-branding, Heytea and Fendi offer a varied range of products to fulfill a variety of demands and tastes. "Joy Yellow" uses brilliant yellow as its topic color, not only choosing yellow fruits such as mango, orange, and passion fruits blended with a green tea base but also producing yellow "Fendi-styled" bags and cups with intricate decorations.

Secondly, with the introduction of unique and limited editions of co-branded items, diversity became abundant. Limited availability fosters a sense of exclusivity and increases customer hobbyism and urgency. The co-branding lasted for one month, from May 19 to June 16, 2023.

Furthermore, the joint brand's introduction quickly sparked the interest of many consumers in making purchases, despite the scarcity of comparable items and food ingredients. Numerous brick-and-mortar establishments saw increased visitation, while online shopping platforms sold out. Five minutes after the product's announcement, one store in Beijing received orders for 468 cups, resulting in an estimated wait time of 150 minutes. During the co-branding month, Heytea and Fendi held an exhibition, "Hand-in-Hand Teahouse," in Temple, Beijing. This exhibition focuses on local Chinese Yi cultural handcrafts and traditions. The display features customized products like "Mujiangzi Special Flavor," "Mujiangzi Yogurt Puffles," Manmang Manna Box Cake, and "FENDI Joy Yellow Special Flavor," along with co-branded accessories like coasters and badges. Heytea and Fendi might effectively target other consumer categories beyond their existing client base by introducing a diverse selection of items. By offering a variety of options, Heytea and Fendi were able to attract not only regular Heytea customers but also fashion lovers, luxury consumers, and trend-conscious individuals, who became Heytea fans due to their cooperation with Fendi.

Researchers have confirmed that incorporating variance is crucial when determining marketing strategy. Yuan Li has conducted research on the impact of limited products on consumer demand stickiness, trend creation, and consumer engagement [12]. According to Xinpeng Liang's consumer behavior study, increasing the range of products can enhance consumers' loyalty to a brand. This finding applies to this example, as the co-branding effort introduced a wide variety of activities and products [13].

3.4. Reasons on Vibration Strategy

The success of co-branding heavily relies on implementing a well-executed vibration strategy. Utilizing strategic social media engagement and forming partnerships with influencers greatly enhanced the brand's vibrancy. Heytea and Fendi utilized well-known influencers and celebrities to promote their co-branded products on social media, generating excitement and delight among their followers. Many consumers eagerly anticipated purchasing Heytea in order to acquire the exclusive "Fendi products" such as coasters, badges, and handbags. Prices in second-hand markets can fluctuate significantly. Coasters, for example, can be priced at over 100 yuan, while badges and handbags can sell for just a few dozen yuan. Even a simple cup can be sold for more than ten yuan. The discussion of co-branding on Chinese social media sites like Weibo and Xiaohongshu was incredibly lively. Phrases such as "Got my first FENDI in HeyTea," "fantastic FENDI design and texture," and "20 years old, got the joint FENDI in full" gained popularity on hot lists, while positive comments praising the good service and good tastes became the prevailing sentiment [14]. During the initial three days of the product launch, the hashtag #heyteaxfendi gained significant traction on Weibo, accumulating nearly 20 million views [14]. Many users have a common interest in creating secondary products. These products include badges attached to bags, clothes, stickers turned into bags, cardboard boxes, toy cars, and more. They have gained significant attention from the public [14].

Considering past studies, experts study the importance of resonating with consumers in marketing. Zhao's study suggests that firms should adapt their marketing strategies to shifts in consumer

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psychology to achieve stable development [15]. Moreover, Wang explores the key role of consumer behavior analysis in the development of marketing strategies, introduces the stages of consumer decision-making, the internal and external factors that influence consumer behavior, and how to apply these insights to develop effective marketing strategies, including product, price, promotion, and distribution strategies [16]. The results show that in-depth analysis based on consumer behavior can help enterprises more accurately meet market demand and achieve a competitive advantage [16].

4. Suggestion

4.1. Suggestion on Value Strategy

In the Chinese beverage market, Heytea faces many competitors, including Guming, Coco, and Nayuki Tea. Heytea had to face these competitors, who have scales of several [14]. As a result, Heytea should improve product quality and innovation, invest more in research and design (R&D), and discover a new supply chain of ingredients that can lower production costs while also improving taste. For instance, it can cultivate tea with a special taste or function.

A similar brand is Starbucks, which is the dominant and most popular coffee brand all over the world. Starbucks' continuous innovation in coffee beverages and food offerings has contributed to its strong brand loyalty and customer retention. In 2022, building on the company's endured efforts to elevate the bar on coffee, Ruggeri (executive vice president and chief financial officer) highlighted its beverage innovation, drastically in cold espresso and plant-based products, as one of the company's quickest-developing categories [17]. Cold drinks accounted for almost 70 percent of Starbucks's overall beverage sales last fiscal year, up 20 percent over the last 3 years [17].

4.2. Suggestion on Variation Strategy

Offering tailored experiences boosts customer satisfaction and promotes customer loyalty. Heytea offers a wide range of menu options, allowing customers to personalize their orders and cater to their unique preferences. Heytea has the potential to enhance its offerings by providing customers with the ability to customize their beverages. This could include options to select toppings, adjust sweetness levels, or experiment with different flavor combinations.

Chipotle, a catering brand known for its highly customizable burritos and bowls, employs a similar strategy. Chipotle began testing some loyalty programs on a small scale in 2015. Later, it launched Chipotle Rewards nationwide in early 2019, and the company began to see the possibility of building closer customer relationships [18]. By the end of 2019, Chipotle Rewards had grown to 8 million members, and by the end of 2020, the loyalty program's reach had more than doubled to 17 million members [18]. Chipotle customers have embraced these experiences, with digital sales growing 24.7% to more than $3 billion in 2021 [18]. In the second quarter of 2022, digital orders accounted for 39% of total restaurant revenue [18]. This customization approach caters to individual preferences and increases customer engagement.

4.3. Suggestion on Vibration Strategy

In order to generate enthusiasm and establish a strong connection with consumers, Heytea can increase its collaboration with influencers and develop unique hashtags. For instance, Glossier, a beauty company that focuses on minimalism and efficacy, gained popularity as a result of its ambassador program. Emily Weiss, the Teen Vogue fashion assistant, initiated a supplementary entrepreneurial endeavor in 2010 by creating a beauty blog named Into the Gloss. The blog rapidly acquired a loyal audience due to its candid and empathetic approach to beauty subjects, which led her to establish her own beauty enterprise in 2014 [19]. Blank spaces and adhesive labels accompany

Glossier goods, facilitating customization and the production of distinctive content. Glossier frequently shares well-crafted content showcasing their products on their primary social media platform, thereby reaching their extensive following of 2.7 million individuals [19]. Glossier's marketing strategy is characterized by its simplicity and directness. The company focuses on developing customized products that inspire customers to generate content. Glossier then shares and reposts this customer-generated material, while also encouraging the creation of more high-quality user-generated content [19]. By adhering to this strategy, Glossier can establish a robust sense of community and consistently enhance the caliber of the information being disseminated.

5. Conclusion

Following the pandemic, there was a surge in popularity for the beverage market, particularly for quick beverages. The ease of entry led to the creation of countless brands. In order to increase their market share, brands implemented several marketing methods to attract public attention and generate a larger income. In this particular scenario, the research focused on analyzing the co-branding partnership between Heytea and Fendi. The goal was to investigate the factors that contributed to this collaboration's success. In order to investigate this inquiry, this study established the concept of co-branding and subsequently examined the factors contributing to its triumph by employing the marketing mix theory of 4Vs. The investigation yielded three recommendations pertaining to various elements. The triumphant value strategy, diversity strategy, and oscillation strategy might encapsulate the factors contributing to the success of co-branding.

This research makes a valuable contribution by examining the co-branding partnership between Heytea and Fendi, which is widely regarded as one of the most successful examples of cross-border co-branding. By researching marketing strategy, other firms can learn how to effectively co-brand and enhance the popularity of their own brands. Nevertheless, a drawback of this study is its narrow scope, as it exclusively examined the Chinese beverage market, thus potentially limiting its generalizability to other co-branding contexts. Every co-branding campaign involves distinct logo dynamics, marketplace conditions, and customer preferences. Hence, the recommendations provided will not result in an equivalent level of satisfaction for various manufacturers or partnerships. To further investigate, researchers can perform comparative case studies on co-branding initiatives in various industries and markets to uncover shared criteria for success and variations based on context.

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Research on the Development and Influence of Internet Supply Chain Finance on Enterprises

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Abstract: In today's digital era, the evolution of internet supply chain finance presents transformative opportunities and challenges for enterprises worldwide. This research explores the development and influence of Internet supply chain finance on enterprises, examining its impact on financial management, operational efficiency, and strategic competitiveness within supply chain networks. The study delves into the growing adoption of Internet supply chain finance solutions by enterprises seeking to optimize working capital, streamline transaction processes, and enhance collaboration with suppliers and partners. As digital technologies reshape traditional finance practices, understanding the implication of Internet supply chain finance becomes imperative for businesses navigating complex global supply chains. A comprehensive literature review synthesizes existing knowledge on internet supply chain finance. Preliminary findings suggest that Internet SCF offers significant advantages to enterprises, including improved liquidity management, reduced transaction costs, and enhanced supply chain resilience. However, challenges such as personal security risks and integration complexities underscore the need for strategic planning and technological readiness. By elucidating the development and influence of internet SCF on enterprises for practitioners, policymakers, and scholars in the field of supply chain finance and digital transformation.

Keywords: Internet supply chain finance, digital technologies, advantages, enterprises, operational efficiency

1. Introduction

This study focuses on the impact of Internet supply chain finance on various enterprises, as well as the advantages and disadvantages of Internet supply chains. This research is very meaningful for enterprises whether they want to understand the Internet supply chain, finance, or make money through the Internet supply chain. This research mainly starts with what is Internet supply chain and how it will affect enterprises. At the same time, this article also uses the literature analysis method to search and read relevant materials and literature. The advantage of this method is that it can well analyze the current situation of Internet supply chain finance, including existing research results and research gaps. At the same time, it can also provide basic theories and find research frameworks through a comprehensive literature review. Finally, the reliability of the data source is crucial. Only by analyzing the literature can this article have reliable data. These are all beneficial for the progress of research. The ultimate goal of this study is to help enterprises better grasp this business model and

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analyze the advantages and disadvantages of this business model through the provided information. So as to enable enterprises to better utilize and master this business model. To achieve this goal, extensive literature analysis and offline consultations were conducted to ensure the accuracy and practicality of the data.

2. Background

Supply chain finance is basically the set of solutions and techniques used to optimize the management of working capital and liquidity across a supply chain. It involves various financial instruments and services that facilitate the smooth functioning and efficiency of transactions and payments between buyers, suppliers, and financial institutions. However the product is unfinished, It can also be understood the supply chain is around the core heart centerpieces, the basic parts and components are made into finished products on semi-finished products, according to the supply sales network delivering it to customers [1]. Internet Finance (ITFIN) refers to traditional financial institutions that use the Internet to carry out financial services such as capital financing, investment, payment, and information intermediary services through advanced technologies such as the Internet and information and communication [2]. Combine internet and supply chain finance can be used to define INCF. INCF Uses big data, cloud computing, search engines, and other technologies to realize the standardization of the information flow and capital flow of enterprises, to establish a continuous and dynamic data support decision-making system, and to improve a set of effective risk management systems [3].

Internet supply chain finance interacts with enterprises by leveraging digital technologies and online platforms to streamline and enhance various aspects of supply chain finance processes. There are multiple ways that ISCF (Internet Supply Chain Finance) could interact with the enterprise. Enhanced visibility and transparency are one of them. It provides real-time visibility into supply chain transactions, allowing enterprises to track payments, invoices, and financing activities across their supply chain partners. This transparency improves decision-making and risk management. The second could be efficient invoice and payment processing to the enterprises. ISCF automates invoice generation, approval workflows, and payment processing. This reduces manual errors, speeds up the payment cycle, and ensures timely payments to suppliers, thereby strengthening relationships. Also, it could provide access to diverse financing options to enterprises. Enterprises can leverage ISCF platforms to access a wide range of financing options for themselves and their suppliers. This includes traditional invoice financing, dynamic discounting, supply chain financing programs, and inventory financing. Under the background of the rapid development of the Internet, supply chain financial services also Can take a combination of a variety of financial products or financing services, which can be financial Services seek richer channels, but also through multi-channel application sharing and gold reduction Risks and hidden dangers possibly encountered in the process of financial business development [1]. In other words, internet supply chain finance effectively reduces the risk and financial burden that might happen. Also, it simplifies supply chain processes by digitizing transactions, reducing paperwork, and automating tasks, thereby accelerating processing time.

3. The Development and Concept of Internet Supply Chain Finance

3.1. The Development and Concept of Internet Supply Chain Finance in China

The domestic supply chain financial services were first proposed by Shenzhen Development Bank, and the first development of the goods mortgage business was in 1998. In 2002, the concept of supply chain finance was systematically proposed and promoted. Until 2005, it was the first to propose the construction of the most professional supply chain financial service provider. By 2023, most commercial banks have launched their own unique supply chain finance services [4]. With the

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growing development of big data and Internet technology, the inevitable direction of supply chain finance development is to combine industry with finance Mutual integration, especially the synergistic effect of the entire supply chain and industry chain, has attracted the attention of various enterprises on the chain. The main benefit is that it can reduce the financing costs of enterprises and improve their efficiency.

3.2. The Development and Concept of Internet Supply Chain Finance Outside China

In the 1970s, the division of labor in production began to shift from within enterprises to between enterprises. This shift resulted in different divisions of labor between Enterprises requiring a central enterprise to coordinate and disperse the various companies involved in the production process and supply chain born in response to the times [4]. Ether in China or other countries, internet supply chain finance all comes from the combination of the traditional supply chain. Traditional supply chain development stops and slowly falls behind. The traditional supply chain has a very complex operation flow, procedures, high cost, and high standards. Making traditional supply chain to inter supply chain finance is an effective way.

4. Analysis

The trust mechanisms of Internet supply chain finance are not perfect. For most enterprises, they tend to choose their interests. The credibility is not built effectively under such a background. Also, internet supply chain finance has a great possibility to divulge important or private information of certain enterprises. Information leaks will put companies and the entire internet supply chain finance at risk. Supply chain finance in the context of the Internet is based on the Internet, and the information transmission speed of the Internet is fast, and the risk of information leakage is greater.

Supply chain finance in the context of the Internet involves many participants, such as: If network security is not guaranteed, it will lead to a large number of data leaks, and in serious cases, it will even affect the stability of the entire supply chain financial system [5]. Internet supply chain finance requires financing companies, guarantee companies, core enterprises, and banks or other participants to submit a large amount of information, through big data analysis of customers can better risk control, but the information is not effectively protected, these data will be exposed to the risk of leakage. Finally, supply chain finance in the context of the Internet involves a large amount of data, and these data contain a large number of customers' user information and privacy information. In the context of the internet, many criminals use the internet to carry out illegal activities. If banks and other financial institutions cannot effectively protect the security of enterprises' information, it will lead to the leakage of a large amount of customer information and privacy. The risk of supply chain finance objectively exists. Small and medium-sized enterprises are unable to effectively grasp the true and reliable raw data of suppliers, facing credit risk, liquidity risk, and operational risk [6].

Internet supply chain finance has evolved from supply chain finance. The evolution of Internet supply chain finance has been marked by digitization, automation, and increased connectivity. It was a basic document exchange first. As time goes by, AI, blockchain, and the Internet of Things for real-time monitoring, and risk management have developed and become part of it.

Internet supply chain finance does have some influences on enterprise operations. Breaking through the limitations of time and space, improving transaction efficiency, and reducing operational costs, the Internet connects the real world and the virtual world and can provide customers with point-to-point all-weather services through the network, breaking through time and space constraints [7]. The traditional supply chain is limited by time and place. However, the Internet supply chain will not. It offers enterprises more efficiency and convinces conditions. Since all the steps are based on the Internet, as long as the Internet exists, the procedures won’t be limited. Enterprises and individuals

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can enjoy internet + supply chain financial services through apps or other internet tools, complete the whole process of payment transactions, and improve transaction efficiency rate.

In the era of the information revolution, information has gradually become an important productive force, and formalization is also a natural trend of financial evolution. The customer relationship of traditional finance is a closed system, and it is difficult to obtain enterprise operation information and transaction data, which leads to serious limitations and significant risks in financial services [7]. Enterprises working with traditional supply chains are limited for many information. It is difficult to obtain information from both customers and enterprises, which can lead to information gaps. The disconnection between the transaction, production, and logistics links of enterprises and banks has had an irreversible impact. When enterprises master the business model of Internet supply chain finance, they can completely break this limitation. Assisted enterprises in implementing information sharing and fast transactions. Finally, using information from electronic trading markets to attract customers for free, enhance the company's value, and gain profits from it.

5. Discussion

As the Internet grows faster nowadays, the evolution of Internet supply chain finance become an essential topic for every enterprise. Many enterprises are optimistic about the development of Internet supply chain finance. This can not only enable the rapid development of some enterprises but also can become a new financing mode. Internet supply chain finance has greater advantages than disadvantages. Traditional supply chain finance become past. With the development of Internet supply chain finance, it effectively solves some deadly problems for enterprises such as information asymmetry. Supply chain finance is a new and high-efficiency finance mode. However, with the development of the Internet and big data, the combination of the supply chain and the Internet will be formed. In the context of the rapid development of Internet technology, supply chain financial services will inevitably move towards more efficient, convenient, intelligent, and secure directions in the future, and will also provide more opportunities and options for enterprises and financial institutions. Combined with the characteristics and industry development trends that it has shown so far, in the future, it will inevitably move in such directions to achieve further expansion and innovation [1].

AI intelligence can be used to help some enterprises identify future trends and identify the possibilities of risk or bias that might happen. Also, provides a suitable solution for certain risks.

Implement intelligent management for each enterprise. Real-time monitoring of possible risks can make each key point closely fit, which accelerates the development of the enterprise.

Big data analysis for each enterprise, and store, applies to every place. It can realize the early warning of the potential risks of the internet supply chain finance and improve the transparency of the enterprise.

In the context of the Internet, the financing end of the Internet platform can also be integrated with the asset end of traditional supply chain finance, so that some problems in the supply chain system can be effectively solved, such as the problem of insufficient funds [8]. The Internet supply chain can effectively help enterprises at the initial stage to solve the problem of financing difficulties, and finance through the participation of different enterprises.

Enterprises can also use the Internet supply chain to customize the solution and how to solve the problems. In the Internet era, especially with the rise of big data, it has become simple and feasible to collect, process, and analyze customer information. Financial institutions can collect a lot of customer information, and transactions between enterprises are more transparent; Using information technology and big data technology to extract useful information from it [7]. From this useful information, enterprises and banks will be able to create separate financing solutions for customers. At the same time, the traditional supply chain only focuses on large elite customers, but the Internet

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supply chain allows enterprises to focus on every customer, including individuals. Although these types of customers have fewer funds, the accumulated amount will be very huge.

In addition, what are the service strategies of enterprises for the Internet supply chain? Firstly, enterprises can enhance the flexibility of big data applications, secondly, cultivate high-quality supply chain financial service talents, and finally, build a supply chain financial service risk control system. Big data is used in various aspects of the entire supply chain, including demand generation, product design, and collaboration. Through the use of big data, the supply chain can be controlled, enabling a clearer understanding of the entire supply chain situation [9]. When enterprises make reasonable use of these big data resources, they can perfectly master the operation of the entire supply chain, which is very important for the coordination of various Internet supply chains. To avoid a series of situations such as omissions or data mismatches. Meanwhile, enterprises can use big data to analyze historical sales data, market trends, and customer behavior for financial or financing planning. The second is to improve the visualization of the entire Internet supply chain. Enterprises can monitor the supply chain in real-time through big data, and find and solve financial or financing problems promptly. In addition to the financing needs of enterprises, treating customers and obtaining benefits are also crucial. Enterprises should strengthen the training of supply chain financial service personnel, provide them with continuing education, and familiarize them with the entire process of supply chain financial services, including front-end market demand analysis, product design, and development, as well as subsequent supplier management and after-sales service processes [9]. Enterprises can adapt to the financing situation of the market by cultivating service-oriented talents in the Internet supply chain. With the rapid development of the Internet, service personnel of the Internet supply chain should also be adaptable and innovative and master the financial situation of the entire Internet supply chain. Implement flexible responses to the financing situation of enterprises. Secondly, it can optimize the financial process of the entire Internet supply chain to improve efficiency, reduce financing costs, and enhance competitiveness. Finally, it is about strengthening. Finally, it is important to improve customer after-sales service, understand their after-sales needs, and enhance customer loyalty. After realizing the above two points, the whole Internet supply chain finance also needs to build an Internet supply chain financial service risk control system. There are many risks in supply chain financial services. Only by building a scientific supply chain financial service risk control system and strengthening the risk management and control work of supply chain financial services can various risk problems be effectively prevented and solved, and high-quality development of the supply chain financial service system be promoted [9].

Because Internet supply chain finance involves the participation of many enterprises and customers, there are quite complex financial transactions in it. There may be corporate default issues, credit risks for the payer, or potential financing issues for both parties. The risk control system can effectively assist enterprises in regulating these financial issues and implementing evaluations. In addition, it can also improve the efficiency of the entire Internet supply chain. Optimize funding and financing issues throughout the entire supply chain through a risk management system. Finally, enterprises can attract financial support and maintain efficient operations through risk management systems. Through a large amount of funds, enterprises can increase confidence, increase investment in projects, and demand financing [10].

6. Conclusion

The research result of this study is that the Internet supply chain can bring different impacts to enterprises. On the positive side, Internet supply chain finance can help enterprises to finance faster and attract more customers. At the same time, the Internet supply chain can break through the time limit, improve transaction efficiency, and reduce the cost of the company. The future trend must be towards the Internet, and the combination of the Internet supply chain has stabilized the future

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foundation of the company. But Internet supply chain finance also has disadvantages. With the rapid development of the Internet, information leakage becomes difficult to control. Therefore, a risk assessment system has become crucial. The risk assessment system supervises the entire Internet supply chain system to prevent information leakage, as well as capital chain rupture, and effective early warning. This study provides valuable reference significance for future research in this direction, mainly affecting the development trend of enterprises in the future and which markets they want to control. By analyzing the advantages and disadvantages of the Internet supply chain, enterprises can effectively evaluate their future market trends and how they should operate Internet supply chain finance.

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Problems and Strategies of Financial Services Supporting the Real Economy

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Abstract: With the rapid development of China's economy, the status and role of the financial industry in the national economy have become increasingly prominent. The healthy development of the financial industry is of great significance for promoting the development of the real economy, adjusting the economic structure, and upgrading the economy. However, there are still some problems with financial services supporting the real economy in China, such as the misallocation of financial resources, high financing costs, and rising financial risks. These issues limit the support financial services can provide to the real economy. This paper analyzes the main problems currently existing in financial services supporting the real economy and proposes countermeasures from optimizing the allocation of financial resources, reducing financing costs for the real economy, preventing and resolving financial risks, and deepening the structural reform of the financial supply side. The aim is to provide references for relevant personnel.

Keywords: Financial services, Real economy, Financing difficulties, Financial risks, Supply-side reform.

1. Introduction

The real economy is the foundation of the national economy, the source of wealth creation, and an important reflection of a country's comprehensive strength. Financial services are a critical driver of the development of the real economy. The actual state of financial services supporting the development of the real economy not only affects the healthy development of the financial industry itself but also concerns the stable operation of the national economy. Since the reform and opening up, China's financial industry has made significant progress, continuously improving its capacity to serve the real economy and strongly supporting the sustained and rapid growth of the national economy. Particularly since the 2008 international financial crisis, facing a complex and severe domestic and international situation, China's financial industry has actively responded and taken initiatives, maintaining overall stability in the financial market and the stable operation of the financial system, providing strong support for the sustained healthy development of China's economy.

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2. Main Problems in Financial Services Supporting the Real Economy

2.1. Misallocation of Financial Resources and Low Efficiency in Serving the Real Economy

For a long time, the efficiency of financial resource allocation in China has been low, with a large amount of financial resources allocated to sectors with overcapacity, while strategic emerging industries and modern service industries suffer from insufficient financial supply. Bank credit is mainly directed towards state-owned enterprises, making it difficult for private enterprises to obtain loans. In direct financing, some "zombie enterprises" receive financing support through various channels, while high-quality small and medium-sized enterprises (SMEs) and innovative companies find it challenging to issue stocks and bonds. Some financial institutions, driven by blind pursuit of profits, invest large amounts of funds in real estate and local government financing platforms, fueling economic bubbles [1]. Overall, the mismatch between financial resource allocation and economic structure and the inadequacy of financial supply to meet the demands of the real economy remain prominent issues.

2.2. High Financing Costs for the Real Economy and Heavy Corporate Burdens

Currently, the overall financing cost for the real economy in China is relatively high, increasing the production and operating costs for enterprises. On one hand, the transmission of monetary policy is not smooth, and the effects of the central bank's interest rate cuts and reserve requirement ratio reductions have not been fully transmitted to the real economy. On the other hand, financial institutions are reluctant to lend, and their risk pricing capabilities are insufficient, limiting the extent of loan interest rate reductions. Usurious interest rates in private lending increase corporate financing costs. Some local governments, in pursuit of political achievements, pressure banks to lend, pushing up financing costs. Multi-level nesting and multiple financing channels keep corporate financing costs high. High financing costs not only increase the operating burden on real enterprises but also weaken their market competitiveness.

2.3. Accumulation of Financial Risks and Severe Risk Prevention and Control Situation

In recent years, China's macro leverage ratio has continued to rise, with high corporate leverage ratios. Risks associated with local government hidden debts and state-owned enterprise debts cannot be ignored. The real estate market bubble is evident, and the leverage ratio of the household sector is rapidly increasing. Against this backdrop, the balance of non-performing loans and the non-performing loan ratio of Chinese banks have continued to rise, increasing pressure on asset quality. Illegal fundraising and internet financial risks occur frequently, with clear cross-market and cross-industry risk transmission. Risks in interbank business, shadow banking, and local financial organizations are accumulating [2]. These risks not only affect the stable operation of the financial system but also increase the difficulty of financial services supporting the real economy.

2.4. Lagging Financial Innovation and Inadequate Financial Supply to Meet the Diverse Needs of the Real Economy

Currently, the breadth and depth of financial innovation in China are insufficient, and the development of direct financing is lagging, making it difficult to meet the financing needs of many emerging industries. Some traditional industries face financing bottlenecks in their transformation and upgrading and technological renovation. Financial products and services are monotonous, unable to meet the differentiated and personalized financing needs of the real economy. The financial market system is imperfect, making it difficult to provide rich and efficient financial services for the

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development of the real economy. Inclusive financial services for small and micro enterprises, agriculture, rural areas, and entrepreneurial innovation are insufficient. Overall, the structural contradictions in financial supply are prominent, and transitioning from ineffective supply to effective supply remains a long way to go.

3. Countermeasures to Promote Better Financial Services for the Real Economy

3.1. Optimize Financial Resource Allocation and Guide Funds to the Real Economy

To optimize financial resource allocation, we must first accelerate the development of a multi-level capital market and broaden financing channels for the real economy. We should vigorously develop the stock market and support qualified real enterprises in going public for financing. It is also necessary to standardize the development of the bond market and encourage real enterprises to issue corporate bonds and medium-term notes for financing. Additionally, we should actively develop and standardize private equity and venture capital funds to provide equity financing support for innovative enterprises. Secondly, we need to innovate financial products that match the characteristics of the real economy and increase the proportion of direct financing. For key areas such as strategic emerging industries and high-end manufacturing, we should vigorously develop specialized financial products and services such as green finance and supply chain finance. For private enterprises, we can establish bond financing support tools to help them raise funds by issuing bonds. For example, in 2020, banking financial institutions worked hard to overcome the impact of the pandemic and increased their support for the real economy. They provided funding sources by issuing special financial bonds for small and micro enterprises and private enterprises, and developed online products such as "Xinyi Loan" and "Bank-Tax Interaction" to lower financing thresholds. From January to November, RMB loans increased by 18.69 trillion yuan, a year-on-year increase of 2.64 trillion yuan, effectively supporting the development of the real economy.

3.2. Take Multiple Measures to Reduce Financing Costs and Alleviate Corporate Burdens

Reducing financing costs for the real economy requires a multi-pronged approach and comprehensive measures. First, we need to smooth the transmission mechanism of monetary policy and push financial institutions to lower loan interest rates. The central bank can guide financial institutions' funding costs downward through tools such as lowering reserve requirement ratios, interest rate cuts, and re-lending, creating conditions for reducing loan interest rates. At the same time, financial institutions should be urged to control interest rate spreads and improve the quality of loan market quotation rates (LPR) quotations, using market-based methods to push corporate loan interest rates down. Secondly, we need to reform and improve the LPR formation mechanism. Further expanding the application range of LPR, linking more loan interest rates with LPR pricing, and gradually making LPR the main reference benchmark for bank loan interest rates. Linking LPR with market interest rate changes and guiding actual loan interest rates to adjust with market interest rate changes. On February 20, 2024, the People's Bank of China authorized the National Interbank Funding Center to announce that the one-year LPR was 3.45%, unchanged; the five-year LPR was 3.95%, down 25 basis points from the previous value. This significant reduction in the long-term LPR and the narrowing of the spread between the one-year and five-year LPR to 0.5 percentage points help improve the coordination of interest rate policies and enhance the efficiency of financial resource allocation.

3.3. Strengthening Financial Supervision to Ensure No Systemic Risks Occur

To prevent and resolve financial risks, it is necessary to adhere to bottom-line thinking and strengthen financial supervision [3]. First, enhance macro-prudential management and strengthen the ability to prevent and control systemic financial risks. Focus on systemically important financial institutions, financial holding companies, and financial infrastructure, strengthening prudential supervision, holding shareholders and management accountable, improving corporate governance, and enhancing risk resistance. Build a macro-prudential policy framework covering various financial institutions and conduct counter-cyclical adjustments to systemic risks. Secondly, strengthen the supervision of shadow banking and cross-financial products. Clarify the risk base of shadow banking and establish long-term mechanisms for functional and behavioral regulation. Strictly regulate cross-financial products, eliminate multi-layer nesting and regulatory gaps, and prevent cross-market and cross-industry risk contagion. Implement thorough supervision and strengthen the management of qualified investors in financial products. In 2017, Chinese financial regulatory authorities introduced a series of regulatory measures to crack down on illegal financial activities. The China Banking and Insurance Regulatory Commission (CBIRC) issued a series of regulatory documents, including the "Three-Year Action Plan," to rectify market chaos in the banking industry. The China Securities Regulatory Commission (CSRC) continuously cracked down on illegal activities, with fines and forfeitures reaching record highs. The CBIRC strengthened the supervision of insurance fund utilization, curbing the tendency of funds to flow away from the real economy. Under the strict regulatory environment, the financial market order has significantly improved.

3.4. Deepening Supply-Side Structural Reform to Match Financial Supply with the Needs of the Real Economy

To meet the needs of the real economy's transformation and upgrading, it is essential to deepen supply-side structural reforms in finance and improve the quality and efficiency of financial services. First, encourage financial institutions to increase innovation efforts and optimize the structure of financial supply. Guide banks, securities, and insurance companies to focus on their core businesses, strengthen innovation in financial products and service models, and develop financial products that meet the needs of the real economy, providing efficient and convenient financial services for production, consumption, and investment. Second, vigorously promote direct financing and broaden financing channels for the real economy. Comprehensively deepen capital market reforms, optimize basic market systems, and actively cultivate various institutional investors. Accelerate the development of multi-level equity markets, deepen the reform of the New Third Board, and regulate regional equity markets. Vigorously develop the bond market, diversify bond types, optimize issuance management, and encourage real businesses to raise funds through bond financing. Third, innovate inclusive financial service methods and increase support for the weak links in the real economy. Use big data, cloud computing, and other technologies to improve the accessibility and convenience of financing for small and micro enterprises. Improve the construction of the social credit system and establish a credit database for small and micro enterprises. Vigorously develop supply chain finance, activate accounts receivable, and alleviate the financing difficulties of small and micro enterprises. Innovate financing models combining equity and debt for advanced manufacturing industries [4]. For example, on June 24, 2024, Chongqing Bank Co., Ltd. planned to issue the first tranche of special financial bonds for small and micro enterprise loans in the national interbank bond market, with a bond term of three years and an issuance scale of 4 billion yuan [5]. After deducting issuance costs, all funds will be used to issue loans to small and micro enterprises, providing financial services to small and micro enterprises. The funds raised from this bond issuance will prioritize loan projects for technology innovation enterprises, increasing support for technological innovation [6].

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4. Conclusion

Finance is regarded as the lifeblood of the real economy, and only with financial stability can the real economy remain stable. Faced with the complex domestic and international economic and financial situations, it is crucial to pay close attention to the prominent issues in financial services for the real economy. To address these issues, various measures must be taken in a comprehensive manner. While preventing and resolving financial risks, it is necessary to continuously deepen supply-side structural reforms in finance. Optimizing the financing structure and credit structure is a current priority. Through these measures, the efficiency of financial resource allocation can be improved, better addressing the difficulties and high costs of financing for the real economy. For instance, innovating financial products and services to support small and medium-sized enterprises, and guiding policies to reduce corporate.

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