OPEN ACCESS
Finance & Accounting Research Journal
P-ISSN: 2708-633X, E-ISSN: 2708-6348
Volume 6, Issue 5, P.No. 731-746, May 2024
DOI: 10.51594/farj.v6i5.1122
Fair East Publishers
Journal Homepage: www.fepbl.com/index.php/farj

Gear up for safety: Investing in a new automotive future in China

Sazib Hossain[1] & Touhidul Islam Nur[2]

[1&2] Nanjing University of Information Science & Technology, Nanjing, China

*Corresponding Author: Sazib Hossain
Corresponding Author Email: esazibhossain@gmail.com / touhidulnur89@gmail.com

Article Received: 18-02-24 **Accepted:** 10-04-24 **Published:** 09-05-24

ABSTRACT

China's electric vehicle (EVs) sector has experienced rapid growth over the past five years, driven by the country's ambition to lead in EV technology globally. As the automotive industry evolves, safety measures become increasingly important for manufacturers and consumers alike. The shift towards EVs is reshaping the automotive industry, posing challenges to traditional industry leaders and raising geopolitical concerns. China's emergence as a hub for EV production has supported this change. Evaluating strategies to mitigate the impact of Chinese-made automobiles, considering their cost-effectiveness and competitive advantage, is crucial as China's cars become more affordable and high-quality. Understanding the potential outcomes of investing in safety is crucial for navigating the complexities of the Chinese automotive market and establishing a sustainable presence in the industry. This study examines the potential outcomes of investing in safety in the Chinese automotive landscape, taking into account factors such as the business environment, regulatory landscape, cultural nuances, and market dynamics. It aims to provide direction for new investors and insights for new automotive companies entering the Chinese market, while emphasizing safety standards and innovation.

Keywords: Electric Vehicle, Investment Safety, Business Environment, Regulatory Landscape, Cultural Nuances, Market Dynamics.

INTRODUCTION

China's automotive industry is undergoing a transformation towards sustainable and technologically advanced transportation solutions, attracting new entrants to contribute to this transformation and secure their foothold in a market known for both opportunities and challenges (Liu et al., 2024). As automotive companies expand globally, the intricacies of investment safety take center stage. Understanding regulatory frameworks, consumer behaviors, and dynamic competitive landscapes is crucial for entering new markets. This study delves into the potential outcomes of prioritizing investment safety, especially for companies establishing their presence in foreign territories, to ensure their success in this dynamic market. Carbon dioxide emissions contribute significantly to climate change, with traffic accounting for around 25% of global CO2 emissions (Kartal et al., 2023). Electric vehicles (EVs) could slow climate change by becoming completely carbon-free if they have batteries and power from other sources. As China's large cities expand and pollution increases, relying on fossil fuels for city mobility becomes unfavorable (Guo, C. et al., 2023). Electric cars play a significant role in modernizing transportation, with the Chinese federal government approving the Auto Industry Restructuring and Development Plan in 2009 to allocate funds towards EV advancement. Compared to conventional cars, electric vehicles offer a quicker, more environmentally friendly, and cost-effective option for urbanization and modernization (Simionescu, 2023). In an era of rapid globalization and eco-friendly economies, the automotive industry must be safe at the crossroads of innovation and strategic expansion. China, with its burgeoning automotive sector and growing consumer base, is a focal point, distinguished by its diverse automotive offerings.

To meet investment objectives, investors need to have sufficient knowledge about available options, including accuracy, timeliness, and relevance (Okunevičiūtė Neverauskienė et al., 2022). Factors such as the business environment, regulatory environment, cultural quirks, and market dynamics must be considered before making a final investment decision. Retail and institutional investors, which include households, corporations, the government, and the rest of the world, distinguish themselves as security investors. Institutional investors invest millions of dollars or more, while retail or individual investors typically have smaller amounts. Investors can either externally impose or internally determine financier limits, taking into account their unique demands and circumstances. Age, taxes, and regulations are mandatory, while investor-specific factors like liquidity are not. Constraints generally restrict investment options and establish the appropriate investment mix for the investor, ensuring they meet their objectives while considering each investor's unique needs and circumstances (Denes et al., 2023). This research paper focuses on the profound implications and potential outcomes associated with investment safety for a new automotive company venturing into the Chinese market. Recognizing China is presently the biggest car market globally. The study aims to dissect the multifaceted dimensions of investment safety. From regulatory frameworks to consumer preferences and from technological advancements to market competitiveness, this exploration seeks to unravel the intricacies that define a successful and secure investment journey for new EV entrants in China.

LITERATURE REVIEW

Over the past several decades, China has become a significant economic superpower (Kasowaki and Issac, 2023). With a population of over 1.425 billion (2023), China is presently

the most populous nation globally (Nye, 2023). As stated by Bagh et al. (2023), China is an important participant in the world economy and a crucial market for foreign investors, stocks. It is the world's second-largest economy, the biggest emerging market nation, and has the second-biggest economy in the world. China's proportion in world trade increased from less than 2½ percent in 1997 to 12 percent in 2022, indicating a corresponding rise in China's importance (World Supply Chains Report, 2023). It attracts multinational companies looking for efficient supply chains and low-cost production because it is a center for global manufacturing (Li, J., 2023). The nation is capable of producing goods in a wide range of industries, such as electronics, textiles, and automobiles. People who understand the value of international investments in a varied portfolio also realize that rising markets, or developing countries increasing their presence in the global economy, may present appealing long-term opportunities (Cubeddu et al., 2023), with China being the largest of all emerging market nations. A guideline encourages future investors to make their decision and invest in China

Previous research on investment safety, including brand, culture, capital, market, price, and trends, has been extensive. All those researchers tried to focus on investment. In this paper, we propose a new idea based on previous research. This paper proposes a novel framework for assessing investment safety in new Chinese automotive companies. This framework analyzes four key independent variables: business environment, regulatory landscape, cultural nuances, and market dynamics (Figure 1). How does it help an investor make a decision? So, this paper is unique to other papers and gives a new, clear direction on investment safety for a new automative company

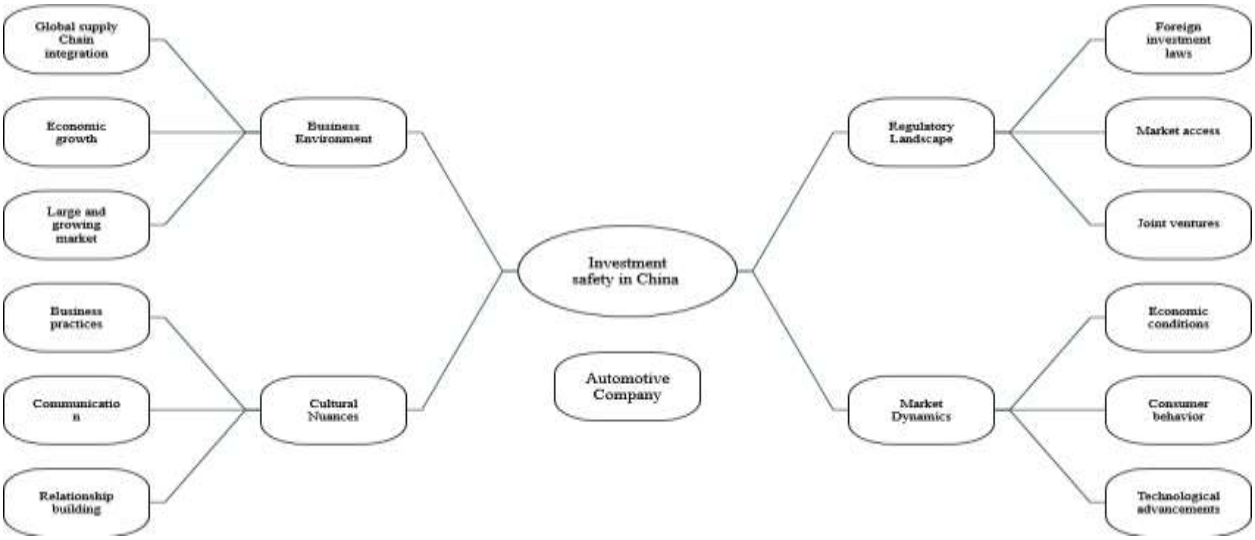

Figure 1: ISC Proposed Model

Investment Safety in China and Business Environment

China's supply chain is a complex network of organizations, resources, activities, and technology used in the production, distribution, and transportation of commodities and services (Shi, X. et al., 2023). It covers a product's entire lifecycle, from raw material procurement to customer sales. Supply chains are essential for ensuring efficient goods flow, cost reduction, productivity growth, and customer satisfaction. They are the foundation of modern economies,

providing access to international markets and enabling customers to purchase a wide range of goods (Malikova, 2023). China's market size, growth potential, and strategic importance attract significant foreign direct investment. Its focus on international trade and participation in global trade agreements strengthens its position in global supply chains. The Belt and Road Initiative (BRI) is an example of China's efforts to enhance trade connections with global nations (Shah et al., 2023). This active engagement in international trade has led to the formation of trade partnerships and collaborations, enabling companies to join the Chinese market and collaborate with Chinese counterparts (Ji et al., 2023).

President Xi provides the greatest summary of the BRI: *"China will actively promote international co-operation through the Belt and Road Initiative. In doing so, we hope to achieve policy, infrastructure, trade, financial, and people-to-people connectivity and thus build a new platform for international co-operation to create new drivers of shared development"* (Xi, J., 2017b, page 61).

Investment Safety in China and Regulatory Landscape

Factors such as foreign investment laws, market access policies, and joint ventures influence China's regulatory landscape for investment safety (van der Linden and Asak, 2023). The Foreign Investment Law of China, effective on January 1, 2020, aims to improve the business climate, address global concerns, and provide a summary of domestic experience. The law aims to create a "golden age" for foreign investors in China amid uncertainty and protectionism (McCalman, 2023). The Chinese government also encourages investment in industry and entrepreneurship through cash rewards like tax deductions, funding, public loans, and financial aid (Wang, X., 2023). Scholars have studied the impact of China's initiatives to liberalize market access for foreign investors, such as the negative list approach, on market openness and sectors open to foreign investment. Changes in regulatory policies, equity joint ventures, and evolving dynamics between foreign and domestic partners all have an impact on joint venture trends (Shi, Y., 2023). As China continues to undergo regulatory reforms, its future outlook for foreign investment remains uncertain (Chen et al., 2023).

Investment Safety in China and Cultural Nuances

Investment safety in China requires a deep understanding of cultural nuances that influence business practices, communication, relationship building, and trust over time (Dathe et al., 2023). China has made significant investments to establish its cultural influence worldwide and is known for its strategic approach to long-term relationships and win-win outcomes (Jiang, 2023). However, substantial investment has not yet reached worldwide mainstream cultural relevance. China's confident position in global matters and tendency to enforce trade limitations in response to geopolitical issues heightens risk and uncertainty (Guo, Y. et al., 2023). The importance of high-context communication for foreign investors is highlighted, emphasizing the importance of implicit communication, non-verbal cues, and contextual understanding (Khasawneh, 2023). The cultural preference for long-term relationships is a recurring theme, with patience required for relationship building and the gradual establishment of trust over time (Jin, X., et al., 2023). This is known as guanxi (关泻) in Chinese, which entails moral duties and favor-exchanging, alluding to having a close relationship and personal trust (Wang, J., 2023). This is a fundamental aspect of conducting business in China, although it is sometimes perceived in Western circles as approaching immoral conduct linked to corruption.

Investment Safety in China and Market Dynamics

China's consumer economy is thriving, with new supply, fields, technologies, and demand in the world's largest potential consumer market (Sun et al., 2023). The nation has become a manufacturing powerhouse, drawing international companies seeking low-cost production and entry into the sizable consumer market. China's enormous population makes it an attractive destination for investors in industries such as healthcare, information technology, engineering, automotive, and luxury goods (Li, F.G. et al., 2023). Foreign direct investment (FDI) is crucial for fostering development and sustaining the competitiveness of China's economy internationally. Due to FDI, China now has the second-largest economy globally (Cai, X. et al., 2023). This has helped the country's economy expand dramatically since joining the WTO in 2001 (Cai, X. et al., 2023). This economic boom has been fueled by China's macroeconomic developments, which include GDP expansion, inflation rates, and government fiscal policies. China's economic policies have fueled its success by promoting export-oriented industry, foreign investment, and the construction of strong infrastructure (Wadembere, 2023). Understanding the dynamics of competition from domestic and international players is essential for foreign investors to formulate effective market entry and growth strategies. China's innovation ecosystem, including advancements in technology, R&D, and entrepreneurship, is crucial for businesses looking to invest in or collaborate with Chinese tech companies (Allioui et al., 2023). Advancements in AI and big data technologies impact industries such as healthcare, finance, and manufacturing, offering insights into investment opportunities and potential risks (Sahoo and Goswami, 2023).

METHODOLOGY

This study aims to explore the potential of eco-friendly investing knowledge and its effectiveness (Xu et al., 2023). It focuses on identifying investment regulations that maximize value added based on investors' willingness to take risks and their uncertainty. This requires a numerical evaluation of investors' willingness to take risks (Sobaih and Elshaer, 2023). When selecting stocks for portfolios, it is crucial to consider their risk and value-creation capacity. The study emphasizes the importance of gradual efforts toward global goals and the rapid progress of creative work. Most studies focus on the constant space, neglecting the factors of circumstances, end results, and the implications of relationship and outcome estimation. The study suggests that the most reasonable offer or variety of offers in a portfolio is essential for achieving the fundamental objective. It also emphasizes the importance of continuous monitoring for solution selection and management. The study investigates if reducing the return on a portfolio can jeopardize the investor's goal of achieving a minimum level of return (Hemerijck et al., 2023).

The methodology evaluates the investment opportunities based on four parameters: business environment, regulatory landscape, cultural nuances, and market dynamics. We use this element to scrutinize uncertain and hazardous situations. Risk and reliability management issues often share similarities. However, they are distinct issues related to understanding random events. We can always assess the risk level of stochastic events (as seen). Take an individual random value (X1 for simplicity) and look at its standard deviation (1).

$$STDEV = \left(\frac{1}{n}\sum_{i-1}^{n}(x_i - \bar{x})^2\right)^{0,5} \quad (1)$$

Nevertheless, We can figure out the form of the reliability function (2)

$$R(x_1), R(x_2), \ldots, R(x_n) \qquad (2)$$

In this context, x1, x2, … , xn are the potential values of the random number, x denotes their mean, and R(Xi) = p{Xi > xi}, where i=1, n, are reliability functions.

Based on the adequate condition of the previous three-year EV market in China, for example, we take data from Guangzhou Xiaopeng Motors Technology Co., Ltd. (Xpeng) in the position of a new EV company. Over the last three years, we have collected the data. We formulate a logical process, evaluate all possible return results, and determine the probability that the investment yield does not fall below a certain level-specific threshold. This decision-making method provides a comprehensive understanding of the connection between the investor's preferences for guaranteed returns and risk within their utility function. After organizing the basement and the display, we employed visual techniques to depict historical selection data. We will detail the plan in writing due to the substantial amount of material involved.

Xpeng consolidated financial statements display overall sales, cost of goods sold, gross profit, operating expenses, and net loss for the years ending on December 31 in 2020, 2021, and 2022 in Table 1

Table 1

Consolidated Financial Statement

	Note	For the Year Ended December 31, 2020 RMB	2021 RMB	2022 RMB
Revenues				
Vehicle sales	18	5,546,754	20,041,955	24,839,637
Services and others	18	297,567	946,176	2,015,482
Total revenues		5,844,321	20,988,131	26,855,119
Cost of sales				
Vehicle sales		(5,350,479)	(17,733,036)	(22,493,122)
Services and others		(227,853)	(632,540)	(1,273,606)
Total cost of sales		(5,578,332)	(18,365,576)	(23,766,728)
Gross profit		265,989	2,622,555	3,088,391
Operating expenses[1]				
Research and development expenses	2(t)	(1,725,906)	(4,114,267)	(5,214,836)
Selling, general and administrative expenses	2(u)	(2,920,649)	(5,305,433)	(6,688,246)
Total operating expenses		(4,646,555)	(9,419,700)	(11,903,082)
Other income, net	2(x)	86,830	217,740	109,168
Loss from operations		(4,293,736)	(6,579,405)	(8,705,523)
Interest income		133,036	743,034	1,058,771
Interest expenses		(22,451)	(55,336)	(132,192)
Fair value gain on derivative assets or derivative liabilities		1,362,025	79,262	59,357
Fair value gain on long-term investments	12	—	591,506	25,062
Exchange gain (loss) from foreign currency transactions		81,181	313,580	(1,460,151)
Other non-operating income, net		9,183	70,253	36,318
Loss before income tax expenses and share of results of equity method investees		(2,730,762)	(4,837,106)	(9,118,358)
Income tax expenses	24(a)	(1,223)	(25,990)	(24,731)
Share of results of equity method investees	12	—	—	4,117
Net loss		(2,731,985)	(4,863,096)	(9,138,972)

Indicate the total number of shares for each category of stock that the company possesses at the conclusion of the period referenced in the annual report in tables 2 and 3. 1,375,210,223 Class A common shares were in circulation as of December 31, 2022 and 348,708,257 Class B common shares were in circulation as of December 31, 2022.

Table 2
Annual Report

	Ordinary Shares Beneficially Owned				
	Class A ordinary shares	Percentage of total Class A ordinary shares	Class B ordinary shares	Percentage of total ordinary shares†	Percentage of aggregate voting power††
Directors and Executive Officers:*					
Xiaopeng He(1)	4,400,000	0.3%	348,708,257	20.5%	71.8%
Yingjie Chen	—	—	—	—	—
Qin Liu	*	*	—	*	*
Ji-Xun Foo	—	—	—	—	—
Fei Yang	—	—	—	—	—
Donghao Yang	*	*	—	*	*
Fang Qu	*	*	—	*	*
HongJiang Zhang	—	—	—	—	—
Fengying Wang	—	—	—	—	—
Heng Xia(2)	52,350,459	3.8%	—	3.0%	1.1%
Hongdi Brian Gu(3)	35,324,660	2.6%	—	2.0%	0.7%
Hsueh-Ching Lu	*	*	—	*	*
Xinzhou Wu	*	*	—	*	*
Jack Han Xu	*	*	—	*	*
Yonghai Chen	*	*	—	*	*
All Directors and Executive Officers as a Group	95,414,191	6.9%	348,708,257	25.7%	73.6%
Principal Shareholders:					
Simplicity and Respect entities(4)	4,400,000	0.3%	348,708,257	20.5%	71.8%
Alibaba(5)	191,918,464	13.9%	—	11.1%	3.9%
IDG entity(6)	68,950,175	5.0%	—	4.0%	1.4%

Table 3
Annual Report

	Note	Ordinary Shares		Treasury Shares		Additional Paid-in Capital	Statutory Reserves	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Shareholders' Equity
		Shares	Par Value	Shares	Par Value					
			RMB		RMB	RMB	RMB	RMB	RMB	RMB
Balance as of December 31, 2020		1,579,805,666	105	(43,044,280)	(4)	46,482,512	—	(730,381)	(11,322,423)	34,429,809
Share-based compensation	23	—	—	—	—	379,948	—	—	—	379,948
Issuance of treasury shares	22	9,396,714	1	(9,396,714)	(1)	—	—	—	—	—
Transfer from treasury shares to outstanding ordinary shares for vested RSUs	22	—	—	11,075,214	1	(1)	—	—	—	—
Issuance of ordinary shares for vested RSUs	22	26,471,648	1	29,494,090	3	(4)	—	—	—	—
Issuance of ordinary shares upon the completion of the Global Offering	22	97,083,300	6	—	—	13,118,079	—	—	—	13,118,085
Foreign currency translation adjustment, net of nil tax		—	—	—	—	—	—	(918,168)	—	(918,168)
Net loss		—	—	—	—	—	—	—	(4,863,096)	(4,863,096)
Appropriations to statutory reserves	2(aa)	—	—	—	—	—	6,047	—	(6,047)	—
Balance as of December 31, 2021		1,712,757,328	113	(11,871,690)	(1)	59,980,534	6,047	(1,648,549)	(16,191,566)	42,146,578

Consequently, we list the past three years below. Regarding historical data display, when we scroll down, we will provide the historical data changes needed for the step-by-step search for a solution, listed with numbers.

History Design and Measures

XPENG is a prominent Chinese company that specializes in designing, creating, producing, and promoting smart electric vehicles that attract a significant and expanding group of technology-conscious middle-class customers. The goal is to promote the advancement of smart EV technology, influencing the future of transportation. To improve its customers' travel experience, XPENG internally develops its complete modern technology for assisting drivers and an advanced operating system within the car, as well as necessary vehicle systems like the engine and the electrical/electronic structure. XPENG is located in Guangzhou, China, and has primary activities in Beijing, Shanghai, Silicon Valley, San Diego, and Amsterdam. At its facilities in Zhaoqing and Guangzhou, Guangdong Province, the business primarily produces electric cars. For additional details, please visit https://heyXPENG.com.

As previously stated, we evaluate historical data and its influence on decision-making. Using stochastic information and ranking algorithms, we determine the market condition and business portfolio goals. The method of analyzing stock performance and investor satisfaction involves using step-by-step stock price volatility indicators and comprehensive facts to make decisions (Eichengreen et al., 2023). Therefore, before proposing a solution, it's crucial to examine the paragraph title, as specific step-growth statistics significantly influence the solution's location. Now, it's important to keep in mind that, in actuality, stocks operate in a four-dimensional space:the business environment, regulatory landscape, cultural nuances, and market dynamics. As an impact of investment on opportunity, reliability, and risk. Together with the dangers outlined in "Item 3. Key Information—D. Risk Factors" of this yearly report and additional risks specified in our prior submissions to the Securities and Exchange Commission, or the SEC, Furthermore, we work in a dynamic and active environment. Moreover, in the market, investors' interests and stock options are constantly in sync, allowing the stochastic optimization process to help investors choose the stock offering the highest value (Zhou et al., 2023). Investing successfully involves a combination of luck and skill. When determining where to distribute our solution, it is important to use suitable and flexible forecasting methodologies and pay close attention to the investment entity's risk tolerance. Slowly working on routes and their confidence regions. Visual representations of these areas are helpful tools for tracking investment progress and acquiring management skills (Cascella et al., 2023).

Xpeng has seen substantial expansion in recent years. Our delivery of Smart EVs rose from 27,041 units in 2020 to 98,155 units in 2021 and 120,757 units in 2022, as shown in figure 2. We plan to grow our business by investing in technology, expanding our product variety, improving our brand recognition, expanding our sales and marketing network, and expanding our service offerings. Our upcoming financial performance will depend significantly on our capacity to effectively handle our expansion and growth.

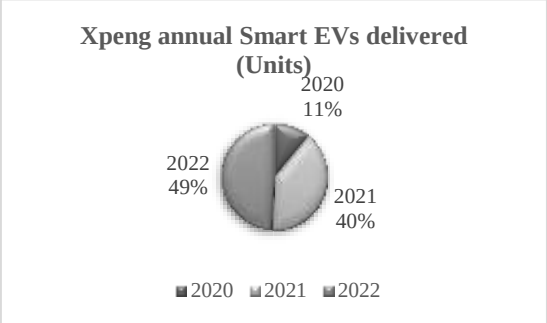

Figure 2: Xpeng Annual Smart EVs Delivered (Units)

Based on the current conditions on the Xpeng stock chart weekly, monthly, and yearly (Figure 3, 4, and 5) and comparing the three companies under current market conditions (Figure 6).

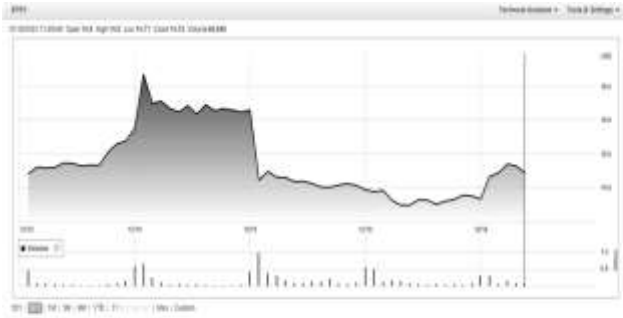

Figure 3: Weekly stock chart (XPEV Web, 19/12/2023, 11.59Am)

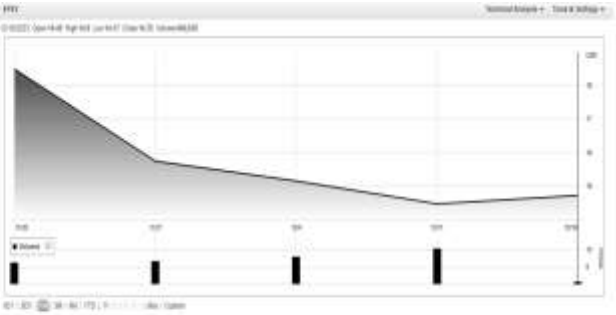

Figure 4: Monthly stock chart (XPEV Web, 18/12/2023)

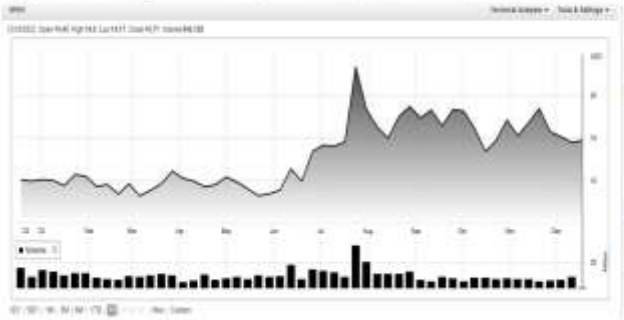

Figure 5: Yearly stock chart (XPEV Web, 18/12/2023)

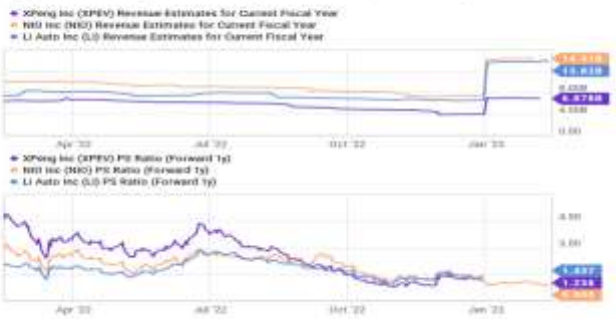

Figure 6: Market performance (XPEV, January, 2023)

Substantial Losses and Unfavorable Cash Flows

We have not made a profit since we started. The creation, production, distribution, and maintenance of smart EVs need a large sum of money. Since day one, we have experienced deficits from our business activities and unfavorable cash flows. We experienced net losses of RMB2,732.0 million, RMB4,863.1 million, and RMB9,139.0 million in 2020, 2021, and 2022, respectively. Everyday activities resulted in a cash outflow of RMB139.8 million, RMB1,094.6 million, and RMB8,232.4 million in 2020, 2021, and 2022, respectively. To quickly grow our business, we have made substantial initial investments in research and development, our manufacturing facilities in Zhaoqing and Guangzhou, our sales and service network, our charging network, as well as marketing and promotion. We want to keep investing heavily in these areas to grow our firm, but there is no guarantee that we will achieve our business objectives successfully. We may not make enough money for reasons such as poor interest in our smart EVs and services, increased competition, difficult economic conditions caused by the COVID-19 pandemic, supply chain problems, and other risks mentioned below. Our future economic prosperity will depend on effectively marketing our smart EVs and services, as well as managing our costs. If we cannot effectively manage the expenses related to the group's operations, we might keep facing deficits and unfavorable cash flows from day-to-day operations in the future.

Challenges Associated with Conducting Business in China

The Chinese authorities might step in or affect the group's activities if we do not follow relevant PRC laws, regulations, or requirements. They could also increase their oversight of offerings made abroad and foreign investments in Chinese companies, potentially leading to significant changes in the group's activities and the value of our Class A common shares and American Depositary Shares (ADSs). If the Chinese authorities enhance their oversight and regulation of activities conducted overseas and foreign investments in Chinese companies, it could significantly limit or entirely prevent us from offering or continuing to provide our Class A

common shares and American depositary shares to investors. This could lead to a significant decrease in the value of these securities or render them worthless.

Rule Regarding Payment of Dividends

The main rules controlling the distribution of dividends by companies consist of the Chinese Company Law, the Law on Foreign Invested Enterprises, and the regulations that go along with them. Based on these guidelines, companies that are either local or foreign-owned in China must allocate a minimum of 10% of their post-tax earnings as general reserves until the total reserves reach 50% of their initial investment, unless particular regulations for foreign investment specify otherwise. Chinese companies cannot distribute profits unless they have offset losses from previous years. Companies may distribute earnings from previous fiscal years in addition to those from the current fiscal year. Guidelines for Registering Foreign Investments for Chinese Residents.

Corporate Income Tax

The Enterprise Income Tax Law of the PRC, also known as the EIT Law, started on January 1, 2008 and was last updated on December 29, 2018. This statute and its related regulations categorize firms as either resident corporations or visitor companies. Companies based in China usually pay a corporate income tax of 25%, whereas foreign companies without branches in China must pay a 10% corporation income tax on the money they make from China. A firm established outside of China but with its primary management based in China is classified as a "resident enterprise," resulting in it being handled similarly to a Chinese domestic corporation for tax reasons. According to the EIT Law's regulations, an actual management group is a governing body that effectively oversees the business's "significant and overall management and control over production and operations, personnel, accounting, and properties." Companies classified as "High and New Technology Enterprises" qualify for a 15% corporate income tax rate instead of the regular 25% rate.

RESULTS AND DISCUSSION

Overall Conditions

The tale of the worldwide electric vehicle surge is essentially the tale of China's electric vehicle surge. The nation's buyers, drawn by government incentives, are increasingly choosing electric vehicles. “China automakers are accelerating vehicle platforms, technology upgrade or innovation, leading to an outstanding user experience. China's EV products are much more competitive than before, and China will continue to see EV penetration expand, in our view,” stated the BofA Securities analysts. "BofA Securities stated in a report in May that it predicts China will remain the biggest market for electric vehicles in the world in 2025, holding a market share of 40%–45%." We expect China's market for electric vehicles (EVs) to grow substantially, driven by renewable energy initiatives and robust government backing. We project the market to reach approximately 292.1 billion US dollars by 2023, with an anticipated average annual growth rate of 6.38% from 2023 to 2028.

According to four parameters: business environment, regulatory landscape, cultural nuances, and market dynamics, we try to find a road for potential investors. From the example, we observed that Xpeng Inc. is performing strongly in the market and advancing. Xpeng Inc. held 1.238% of the market share in January 2023, and the stock's popularity rose. On December 18, 2023, the price opened at $14.45, reached a peak of $14.9, dropped to a low of $14.17, and closed at $14.71 with a trading volume of 640,120. The previous month had similar numbers,

with an opening price of $14.45, a high of $14.9, a low of $14.17, and a closing price of $14.72, along with a volume of 640,630. In the current week, the price opened at $14.8, hit a high of $14.8, went down to a low of $14.71, and closed at $14.72, with a volume of 66,848. Xpeng, Inc. has experienced substantial growth in recent years. Revenues rose from 5,844.3 million RMB in 2020 to 20,988.1 million RMB in 2021, and then to 26,855.1 million RMB in 2022. The number of smart electric vehicles delivered increased from 27,041 units in 2020 to 98,155 units in 2021 and 120,757 units in 2022. We intend to expand our business by investing in technology, diversifying our product range, enhancing our brand recognition, expanding our sales and marketing reach, and broadening our service options. Our upcoming financial results will depend significantly on how well we can handle our expansion and growth.

Exploration and Innovation

Technological progress is crucial for our business, and we intentionally create many of the main technologies internally, like ADAS, smart operating systems, powertrains, and E/E architecture. We have been dedicating significant resources to our research and development endeavors. In 2020, 2021, and 2022, we allocated RMB 1,725.9 million, RMB 4,114.3 million, and RMB 5,214.8 million to research and development, respectively. Our spending on research and development made up 29.5%, 19.6%, and 19.4% of our total revenue in 2020, 2021, and 2022, respectively. The electric car sector is making rapid technological advancements, and we must allocate substantial resources to research and development in order to stay ahead in technology and competitive in the market. As a result, we anticipate that our research and development costs will remain substantial.

In addition to our internal knowledge, we also depend on specific technology from our suppliers to improve the efficiency of our Smart EV. To be more specific, we do not produce battery cells or semiconductors, so we rely on suppliers for these technologies. As technology advances, we aim to improve our current models and release new ones to offer smart EVs with the most recent features and most up-to-date technology, such as battery cells and semiconductors. This could result in significant expenses and reduce the return on investment for our current models. Furthermore, we have already begun to publish. We introduced our third electric car model, the P5, in September 2021, and the inclusion of LIDAR technology in the new model led to significant expenses. There is no guarantee that we will be able to outfit our smart EV with the most recent technologies. Even if we stay up to date with technological advancements and create new models, our existing models may become outdated faster than anticipated, potentially lowering our return on investment.

Our intelligent electric vehicles, along with their computer programmes, do not provide a satisfactory experience with moving about and match consumer anticipations, it could have a notable adverse effect on our business, financial results, and reputation.

CONCLUSION AND RECOMMENDATION

Final Thoughts

China's electric vehicle sector has experienced a significant transformation, mirroring the country's transition from a closed and centrally controlled economy to a leading global manufacturing hub. The historical progress of China's cars may be traced from its time before reforms, when it had little international involvement, to the economic changes and openings that encouraged global investments and exports. China's development as a manufacturing hub

in the 1990s and 2000s confirmed its importance in global car and supply networks. China's electric vehicle industry and components are constantly changing, affecting the world economy and shaping international trade trends. Economic shifts, technical breakthroughs, and intentional government plans have influenced the transition from a centrally managed economy to a global industrial center. When businesses and stakeholders interact with China's EV and EV parts, it's important to carefully think about how they are changing, what effects they might have, and what could happen in the future. This is crucial for promoting sustainable growth and positive partnerships in the ever-changing world of global trade and business.

Government support and regulations have had a significant impact on the development of the Chinese electric vehicle sector. Initially, China focused on additional information about sustainable energy, mostly due to the country's security concerns. The country sought to decrease its dependence on imported oil and natural gas, acknowledging the possible weakness of these energy sources during emergencies. China has put in place different rules to encourage the use and manufacturing of electric vehicles. Efforts like the Growth Strategy (2012–2020) set lofty targets for annual EV production, while the Administrative Provisions from 2017 establish specific requirements for producers and electric vehicles, focusing on technological guidelines and safety checks.Along with legislation, government assistance has also played a key role in encouraging the purchase of electric vehicles. China's dedication to China has set a target for carbon neutrality by 2060, which strongly encourages the use of electric vehicles. The government offers financial support and advantages, such as reduced taxes on electric vehicles and funding for environmentally friendly bus groups. In September 2022, China's Ministry of Finance (MOF), the State Taxation Administration (STA), and the Ministry of Industry and Information Technology (MIIT) announced that the exemption from vehicle purchase tax for new energy vehicles (NEVs) purchased between January 1, 2023, and December 31, 2023, will continue. We customize our smart electric vehicles for the middle-income clientele in China. Our smart electric vehicles provide advanced technology features like Advanced Driver Assistance Systems (ADAS) and intelligent networking to enhance the convenience of the mobility experience. There is no guarantee that we will be able to keep improving these smart technology features and increasing their value for our target clients. During the design process, we carefully consider our potential clients' choices. For instance, we specifically tailor our distinct ADAS for driving habits and road situations in China. Yet, there is no guarantee that we can precisely identify consumer preferences and efficiently cater to them in the design of our intelligent electric vehicles. Additionally, the driving feel of a smart EV is distinct from that of an ICE. automobile, and our clients can face challenges in getting used to enhancing the driving feel of a smart EV. Because customer tastes are always changing, we might not be able to provide new product features that customers want quickly enough.

Our smart EVs can have issues in design or production that result in them not functioning as anticipated or needing repair, and some elements of our smart EVs can require more time than anticipated to become operational. For example, our Smart EV heavily depends on our exclusive software, such as XPILOT, XNGP, and Xmart OS, which is naturally intricate. These software systems may have hidden flaws or be vulnerable to external attacks. While we try to address any issues with our Smart EV promptly and efficiently, our efforts may not be prompt or meet our customers' expectations. Additionally, although we have conducted thorough

testing within our company on the smart EVs we produce, we presently have a restricted foundation for assessing the specific long-lasting quality, reliability, sturdiness, and performance characteristics of our smart EVs. We assure you that we are continuously improving our Smart EVs to prevent product defects, delays, or other issues that could damage our reputation through product recalls, liability claims, warranty costs, and other expenses, potentially negatively impacting our business, financial status, and future prospects.

Recommendations

According to our research, the company has a short track record and is facing significant difficulties as a newcomer in the field. To avoid negative impacts on trade names and financial performance, effective growth management is critical. The corporation's activities have resulted in substantial deficits and unfavorable cash flows. Researcher recommend an enhancement of research and development (R&D) to address existing issues. Focusing on R&D can potentially resolve the problem. Additionally, there is a dependence on earnings produced by a limited selection of smart EV models. The study suggest the introduction of new models to broaden the customer base, increase profits, and reduce operational losses.

Abbreviations

ADAS= Advanced Driver Assistance Systems
AI= Artificial intelligence
BofA= Bank of America Corporation
CO2= Carbon Dioxide
EV/EVs= Electric Vehicles
FDI= Foreign direct investment
GDP= Gross Domestic Product
ICE= Internal Combustion Engine
ISC= Investment Safety in China
MIIT= Ministry of Industry and Information Technology
MOF= China's Ministry of Finance
NEVs= New Energy Vehicles
OS= Operating Systems
R&D= Research and Development
RMB= The Renminbi
STA= State Taxation Administration
WTO= The World Trade Organization

References

Allioui, H., & Mourdi, Y. (2023). Unleashing the potential of AI: Investigating cutting-edge technologies that are transforming businesses. *International Journal of Computer Engineering and Data Science (IJCEDS)*, *3*(2), 1-12.

Bagh, T., Waheed, A., Khan, M.A., & Naseer, M.M. (2023). Effect of economic policy uncertainty on China's stock price index: a comprehensive analysis using wavelet coherence approach. *SAGE Open*, *13*(4), 21582440231210368.

Cai, X., Zhao, X., Jiang, C., & Zhang, L. (2024). China's foreign direct investments: Do they promote domestic green technology?. *Journal of Policy Modeling*, *46*(1), 60-74.

Cascella, M., Cascella, A., Monaco, F., & Shariff, M.N. (2023). Envisioning gamification in anesthesia, pain management, and critical care: basic principles, integration of artificial intelligence, and simulation strategies. *Journal of Anesthesia, Analgesia and Critical Care*, *3*(1), 33.

Chen, L., Wang, N., Li, Q., & Zhou, W. (2023). Environmental regulation, foreign direct investment and China's economic development under the new normal: restrain or promote?. *Environment, Development and Sustainability*, *25*(5), 4195-4216.

Cubeddu, L., Hannan, S.A., & Rabanal, P. (2023). External financing risks: How important is the composition of the international investment position?. *Journal of International Money and Finance*, *131*, p.102772.

Dathe, T., Müller, V., & Helmold, M. (2023). Understanding the Chinese Culture. In *Business Opportunities and Risks in China: Strategies and Recommendations from a European Perspective* (pp. 109-123). Cham: Springer International Publishing.

Denes, M., Howell, S.T., Mezzanotti, F., Wang, X., & Xu, T. (2023). Investor tax credits and entrepreneurship: Evidence from us states. *The Journal of Finance*, *78*(5), 2621-2671.

Eichengreen, B., Ferrari Minesso, M., Mehl, A., Vansteenkiste, I., & Vicquéry, R. (2023). Sanctions and the exchange rate in time. *Economic Policy*, eiad034.

Guo, C., Zhang, X., & Iqbal, S. (2024). Does oil price volatility and financial expenditures of the oil industry influence energy generation intensity? Implications for clean energy acquisition. *Journal of Cleaner Production*, *434*, 139907.

Guo, Y., Zheng, H., Zeng, Y., Fan, W., Albahooth, B., & Bhuiyan, R.A. (2023). Natural resources extraction of RCEP trade bloc: Examining geopolitical risk and economic situation. *Resources Policy*, *86*, 104227.

Hemerijck, A., Ronchi, S., & Plavgo, I. (2023). Social investment as a conceptual framework for analysing well-being returns and reforms in 21st century welfare states. *Socio-Economic Review*, *21*(1), 479-500.

Jiang, Y. (2023). Financing water investment for global sustainable development: Challenges, innovation, and governance strategies. *Sustainable Development*, *31*(2), 600-611.

Ji, X. (2023). Stay Useful, Stay Relevant: Singapore's Institutional Diplomacy toward China's Belt and Road Initiative. *Asian Perspective*, *47*(4), 553-577.

Jin, X., Bolt, G., Spierings, B., & Hooimeijer, P. (2023). Network-diversification and trust-building strategies of transnational migrant entrepreneurs: evidence from African migrant entrepreneurs in South China. *Ethnic and Racial Studies*, *46*(7), 1437-1455.

Kartal, M.T., Pata, U.K., Depren, Ö., & Erdogan, S. (2023). Effectiveness of nuclear and renewable electricity generation on CO2 emissions: Daily-based analysis for the major nuclear power generating countries. *Journal of Cleaner Production*, *426*, 139121.

Kasowaki, L., & Issac, S. (2023). *The Demographic Engine: Assessing China's Economic Growth Through Population and Labor Forces* (No. 11493). EasyChair.

Khasawneh, M.A.S. (2023). Exploring the role of culture in shaping communication practices in Saudi Arabian organizations: a qualitative study. *Journal of Southwest Jiaotong University*, *58*(5).

Li, F.G., Bataille, C., & Vogt-Schilb, A. (2023). Net-Zero industry: options for plastics, textiles, automobiles, and fisheries in Colombia, Ecuador, and Peru.

Li, J. (2023). The diffusion of automation technology in global supply chains and its heterogeneous effects on the labor market. *Law and Economy*, *2*(9), 15-30.

Liu, Y., Shi, J., Huang, F., Hou, J., & Zhang, C. (2024). Unveiling consumer preferences in automotive reviews through aspect-based opinion generation. *Journal of Retailing and Consumer Services*, *77*, 103605.

McCalman, P. (2023). Robust trade policy to offset foreign market power. *European Economic Review*, *154*, 104434.

Malikova, D. (2023). Methodology for effective assessment of the level of economic security of banks. *Innovative Society: Problems, Analysis and Development Prospects (Spain)*, 96-98.

Nye, J.S. (2023). As China rises, must others bow?. In *Soft Power and Great-Power Competition: Shifting Sands in the Balance of Power Between the United States and China* (pp. 89-95). Singapore: Springer Nature Singapore.

Sahoo, S.K., & Goswami, S.S. (2023). A comprehensive review of multiple criteria decision-making (MCDM) Methods: advancements, applications, and future directions. *Decision Making Advances*, *1*(1), 25-48.

Sudirjo, F., Diantoro, K., Al-Gasawneh, J.A., Azzaakiyyah, H.K., & Ausat, A.M.A. (2023). Application of ChatGPT in Improving Customer Sentiment Analysis for Businesses. *Jurnal Teknologi Dan Sistem Informasi Bisnis*, *5*(3), 283-288.

Shah, W.U.H., Wang, B., & Yasmeen, R. (2023). Evaluating the role of banking efficiency, institutions and financial development for sustainable development: Implications for Belt and Road Initiative (BRI). *Plos One*, *18*(10), e0290780.

Shi, X., Liu, W., & Zhang, J. (2023). Present and future trends of supply chain management in the presence of COVID-19: a structured literature review. *International Journal of Logistics Research and Applications*, *26*(7), 813-842.

Shi, Y. (2023). International practice analysis of the negative list: Chinese example of shipping market access. *Frontiers in Marine Science*, *9*, 1088093.

Simionescu, M. (2023). The circular economy and sustainable development in the European Union's new member states. *Economics, Management and Sustainability*, *8*(1), 6-15.

Sobaih, A.E.E., & Elshaer, I.A. (2023). Risk-taking, financial knowledge, and risky investment intention: expanding theory of planned behavior using a moderating-mediating model. *Mathematics*, *11*(2), 453.

Sun, Y., & You, X. (2023). Do digital inclusive finance, innovation, and entrepreneurship activities stimulate vitality of the urban economy? Empirical evidence from the Yangtze River Delta, China. *Technology in Society*, *72*, 102200.

van der Linden, R.W., & Łasak, P. (2023). A Comparative Analysis of the Chinese and the US Financial System and Its Regulatory Environment. In *Financial Interdependence, Digitalization and Technological Rivalries: Perspectives on Future Cooperation and Integration in Sino-American Financial Systems* (pp. 9-21). Cham: Springer Nature Switzerland.

Wang, X. (2023). The research of Chinese government in venture capital market. *Journal of Financial Risk Management*, *12*(04), 310-327.

Wang, J. (2023). 翟学伟 [Zhai Xuewei], 中国人的社会信任 [Social Trust among the Chinese: The Guanxi Perspective].

Wadembere, A.M. (2023). Unveiling the path to rapid economic growth: lessons from aggressive industrialisation strategies of selected East Asian countries. *Economic Development Research*, 23.

Xu, C., Shu, W., & Su, Y. (2023). International tourism and business productivity: does eco-friendly technologies matter?. *Environmental Science and Pollution Research*, *30*(23), 63691-63703.

Zhou, Y., Diao, X., & Lv, D. (2023). Role of OTC options in stock price efficiency: Evidence from the Chinese market. *Accounting & Finance*, *63*(4), 4629-4655.