INSTITUTO
UNIVERSITÁRIO
DE LISBOA

An analysis of corporate governance under the dual-class structure – A case study of JD

Yijia Liu

Master (MSc) in Business Administration

Supervisor:
PhD Álvaro de Borba Cruz Lopes Dias, Invite Assistant Professor,
ISCTE Business School - University Institute of Lisbon

April 2021

iscte
BUSINESS
SCHOOL

Department of Marketing, Strategy and Operations

An analysis of corporate governance under the dual-class structure – A case study of JD

Yijia Liu

Master (MSc) in Business Administration

Supervisor:
PhD Álvaro de Borba Cruz Lopes Dias, Invite Assistant Professor,
ISCTE Business School - University Institute of Lisbon

April 2021

Acknowledgment

Firstly, I would like to thank all those who helped me during my academic journey. I would like to extend my deepest gratitude to my mentor, Professor Alvaro Diaz. He helped me to complete the project of case analysis. With his constant encouragement and guidance, I became more rigorous in academic pursuit.

Secondly, I am sincerely grateful to all the professors who have taught me during my ISCTE-IUL study, and I have learned more professional knowledge than before. This laid a good foundation for me to finish the thesis.

Finally, I would like to thank my parents and friends who have always supported me in China. They encouraged me on the phone and online. The work of the paper was arduous. With their help, I completed it more smoothly and with full confidence.

Resumo

O comércio eletrônico na china tem crescido rapidamente nos últimos 20 anos. Tanto as tecnologias de pagamento móvel como as de transporte logístico têm desempenhado um papel crucial. Com o rápido desenvolvimento da indústria de comércio eletrônico chinesa, um grupo de excelentes empresas de comércio eletrônico é criado. A JD é um dos líderes das empresas de comércio electrónico. Na fase de crescimento da empresa, a JD preparou-se para construir muitas construções básicas para desenvolver a logística, anexando clientes com uma estratégia de marketing de baixo preço. Isto levou a um grande montante de financiamento externo para a JD. A fim de garantir o poder de controle da JD, seu fundador Liu Qiangdong e sua equipe adotaram estrutura dual-share quando se tornou público em 2014. Este documento foca as questões de governança corporativa da estrutura dual-share adotadas pela JD, e apresenta sugestões razoáveis de melhorias. Este trabalho adota principalmente métodos de revisão de literatura e análise de casos, e principalmente coleta dados públicos até a data da JD, conduz análises de negócios, estrutura acionária, risco e finanças na JD. Além disso, este documento interpreta melhor as razões e influências da estrutura dual-share adoptada pela JD, de acordo com a teoria do agente principal, teoria das partes interessadas e teoria da assimetria de informação.

Palavras-chave: Estrutura de ações de duas classes; Governança corporativa; Analise financeira.

Classificações JEL: Geral (M30); Finanças Corporativas e Governança (G3).

Abstract

E-commerce in China has grown rapidly in the past 20 years. Two technologies play a crucial role; One is mobile payments, and the other is logistics. With the rapid growth of the industry, several excellent e-commerce enterprises emerge at the historic moment. JD is one of the best-known companies in the e-commerce industry. During the growth period, JD has established much infrastructure, developed logistics and used the low-cost marketing strategy to attract customers. This has led to a large amount of external financing for JD. To secure control of JD, the founders adopted a dual-class share structure when they first went public in 2014. This paper will focus on the corporate governance issues of JD's dual-class share structure and put forward reasonable suggestions for improvement. This paper mainly adopts case analysis and financial analysis method. This paper collects the public data of JD since its establishment and conducts business analysis, equity structure analysis, risk analysis and financial analysis on JD. Based on principal-agent theory, stakeholder theory and information asymmetry theory, this paper will further explain the reasons for JD to adopt dual share structure and the influence of adopting this structure.

Keywords: Dual-class share structure; Corporate governance; Financial analysis.

JEL Classifications: General (M30); Corporate Finance and Governance(G3).

Contents

Index of Tables

Index of Figures

1. Background

1.1 Introduction

For enterprises, when funds are not enough to support their expansion or strategic layout, they need to integrate funds internally or externally. The financing paths of enterprises include cash, debt, and equity financing. The modern capital structure theory for the study of corporate financing decisions is proposed by Modigliani and Miller's (1958). This research focused on capital structure and enterprise value. Debt financing and equity financing clearly have different advantages and disadvantages. Equity financing cannot increase the asset-liability ratio. Equity financing can also be done without increasing financial risk. Therefore, equity financing is a suitable choice for enterprises lacking capital to obtain external investment. Debt financing requires the enterprise to pay interest on schedule and due obligations to repay the principal. Enterprises are likely to face higher financial risks.

From the perspective of corporate control, debt financing does not weaken shareholder control. If the enterprise chooses the way of equity financing, the existing shareholders will face the dilution of the control right of the enterprise (Amihud & Travlos 1990). The debate about whether founders and outside CEOs are up to the task of running a business has already begun. Nelson (2003) argues that founder CEOs are more likely and more motivated to own more shares at the time of the company's IPO. With the increase of capital demand of enterprises, venture investors, investment banks and so on participate in the equity of enterprises. Founder CEO change or succession may occur (Jain & Tabak,2008).

Among Chinese enterprises, high-tech enterprises, low financial leverage enterprises and those with external financing needs are more likely to get listed in the United States (Zhang & King, 2010). By the end of 2019, 233 Chinese companies had listed in the US, among which there are still many high-quality companies, such as Alibaba,[1]SINA,[2]Baidu,[3]and so on. Some unicorn companies will also choose to list overseas, such as JD,[4]Pinduoduo[5]and Bilibili.[6]In the past, China's capital markets adhered to the traditional "one share, one vote" shareholding

1 From: https://www.alibabagroup.com/en/global/home
2 From: http://ir.sina.com/
3 From: https://ir.baidu.com/
4 From: https://ir.jd.com/
5 From: https://investor.pinduoduo.com/
6 From: https://ir.bilibili.com/investor-home/

structure. The company may dilute its stake to raise capital. In some business cases, outside investors may compete with existing managers for control. The shareholding ratio of an enterprise directly determines the control right of the company. This can result in founders owning fewer shares after the round than they did before the round. As a result, company founders may face a loss of control.

The US has a more sophisticated dual-class listing policy and system than China. Some Chinese companies have chosen to list in the US. This is a system whereby a company issues shares with low-level voting rights to public investors. At the same time, a unique shareholding system for founders and management teams to issue senior voting shares. Alibaba's partnership and JD's dual-class share structure are both applications of a reserved control listing. Notably, both companies have e-commerce businesses. These enterprises have their own development characteristics. There are also differences between firms in the choice of ownership structures. The growth of both companies is tied to the popularity of the Internet in China, the growth of the country's online population and the changing consumption habits of Chinese people. China's e-commerce has also benefited from mobile payments and logistics. Arguably, the growth of e-commerce in China has spurred the growth of these companies. It can also be said that the expansion of these enterprises has stimulated the progress of e-commerce in China.

Based on the above background and fact, this paper chooses the dual-share class structure of e-commerce enterprises as the research content. This paper aims at JD. This company enjoys high visibility and representativeness and can obtain more accurate financial data and public information. Therefore, this paper takes JD as the main body of the case study to discuss its dual shareholding structure.

The author first introduces the background of the process of e-commerce industry in China. Subsequently, this paper elaborates on the case of JD. This paper introduces the basic situation, development process, business characteristics and operation of JD. According to financial reports and public data of JD, this analysis explains the change of shareholding structure.

This paper conducts a case study on three main problems. Analysis of the reasons why JD chooses dual class share structure. After the adoption of dual share structure, the financial impact on it. JD dual-class share structure under the existing risks, and to provide reasonable suggestions for the problem. This paper uses indicators analysis and comparative analysis in financial analysis to analyze the performance of JD. This paper argues that the factors influencing JD's business performance and corporate strategy change are dual ownership structure. To put forward more reasonable suggestions for JD, this paper studies and analyzes the causes and consequences of the implementation of dual-class share structure. The adverse consequences of dual-class share structure include the increase of financial burden of enterprises, the increase of agency cost and the weakening of internal supervision mechanism. JD's dual-class share structure also brings some drawbacks. JD should reasonably limit the application scope of binary shareholding structure, improve the internal supervision mechanism of the enterprise, enhance the awareness of information disclosure, and pay attention to the protection of the interests of minority shareholders.

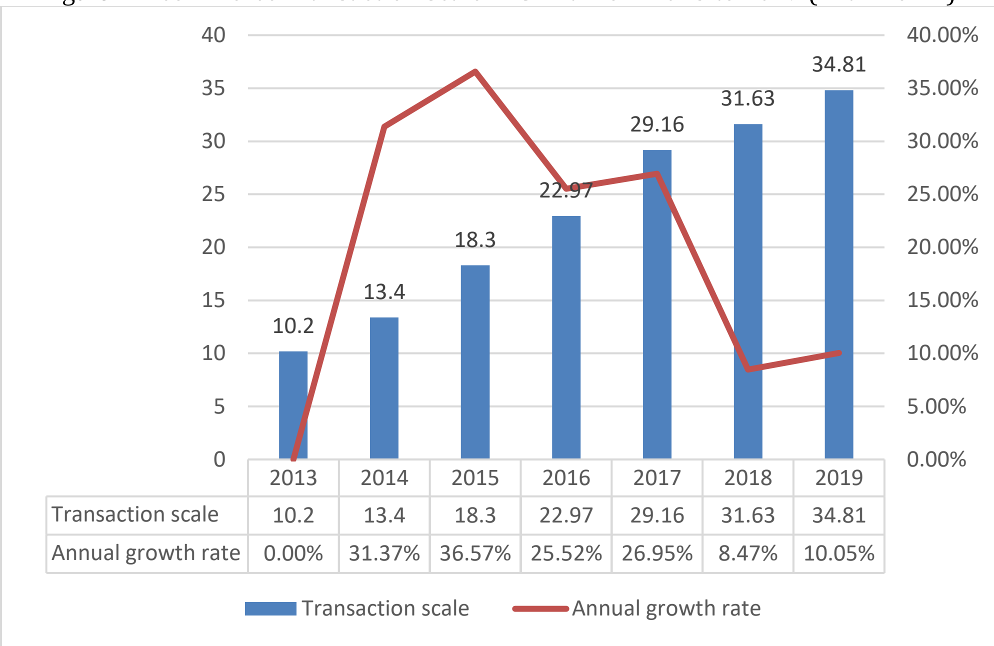
1.2 The progress of e-commerce industry in China

The advancement of information technology and the growth of network users are key factors in the development of e-commerce in China. From 2005 to 2015, the number of Chinese netizens swift grew. The competition pattern of Chinese e-commerce is constantly changing and upgrading. The capital and technology of e-commerce achieve breakthrough, especially the development of online payment technology and logistics information technology is worth mentioning.

Based on the report "20 Years of E-commerce Development in China"(CIERI,2019), which is also based on the theory of Carlotta Pearce's techno-economic Paradigm, the progress of e-commerce industry in China could divide into three stages. The initial stage is from 1999 to 2005. The rapid development stage is from 2005 to 2015.The mature period is from 2015 to 2019.The operating revenue of e-commerce companies has grown from ¥16.4 trillion yuan in the past five years to ¥32.9 trillion yuan in 2019.

In the 21st century, information technology has entered thousands of households. Smartphones have become popular consumer goods. Based on statistics on the scale of internet users in China (QZIRI,2020), the amounts of Chinese netizens increased from 20 million to 829 million in 2018. Technology has changed consumption patterns. Smartphone shopping is no longer limited by geography or time. Shopping on the Internet has been widely accepted in China. Under this circumstance, several e-commerce companies have emerged. In 2013, e-commerce transactions scale was ¥10.2 trillion. As at 31 December 2019, transactions reached to ¥3.481 billion. From 2014 to 2017, the annual growth rate was more than 25%. In 2018 and 2019, the annual growth rate dropped to 8.47% and 10.05% respectively. But it's still growing. As can be seen from figure 1, the scale of e-commerce transactions shows a continuously growing trend in China.

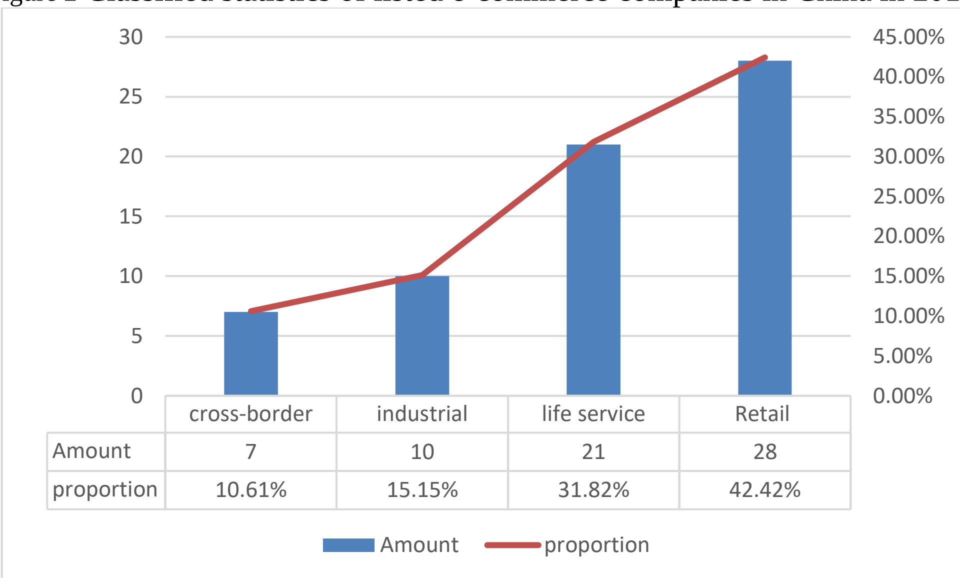
Figure 1 E-commerce Transaction Scale in China from 2013 to 2019 (in trillion ¥)



Source: https://bg.qianzhan.com/

According to the statistics of Chinese e-commerce enterprises (ECRC,2020), As of December 31, 2019, China has 66 listed e-commerce companies. Based on its classification, there are a maximum of 28 retail e-commerce companies and a minimum of seven cross-border e-commerce companies. There were 21 life-service e-commerce companies and 10 industrial e-commerce companies, respectively. In 2019, the total market value of listed e-commerce companies reached ¥6,452.235 billion. Six of them have a market value of more than ¥100 billion. As can be seen from figure 2, nearly 40% of e-commerce enterprises are distributed in retail e-commerce. Therefore, the results of data analysis show that the main aspect of e-commerce progress is retail e-commerce.

Figure 2 Classified statistics of listed e-commerce companies in China in 2019



Source: http://www.100ec.cn/zt/2019ssgsbg/

Review the history of E-commerce in China. The earliest e-commerce website was named 8848.[7]The founder is Wang Juntao, who is the first person engaged in Business to Customer (B2C) e-commerce model in China. He proposed the idea of merging online and offline. But the site failed. Later scholars mainly believe that it is caused by unstable corporate strategy and unreasonable equity structure. There is no doubt that in just a decade since, China's e-commerce model has transformed itself from a hard-to-reach novelty to a hugely popular shopping model. JD, Pinduoduo and Taobao Mall have all become major online shopping platforms for Chinese people. Traditional brands such as Suning[8] and Gome[9] have also opened online shopping malls.

The progress of E-commerce in China cannot be separated from the development support of two fields, one is the field of electronic payment, the other field is logistics. In 2004, Alipay[10] was officially established. In 2013, Tenpay[11] cooperated with WeChat[12] to launch the payment function. Due to the advantages of WeChat in the social field, it lays a good foundation for the payment function. Mobile payment is an important part of the e-commerce industry chain. With the expansion of third-party payment applications, mobile payments have penetrated the lives of netizens in China. The transaction frequency and overall transaction scale of mobile payment show a trend of rapid growth. In 2019, the total mobile payment merchandise of China was ¥2,1601.5 billion. In the fourth quarter of 2019, Alipay accounted for 55% of mobile payment transactions. Tenpay mobile payment transactions accounted for 39% of the total.

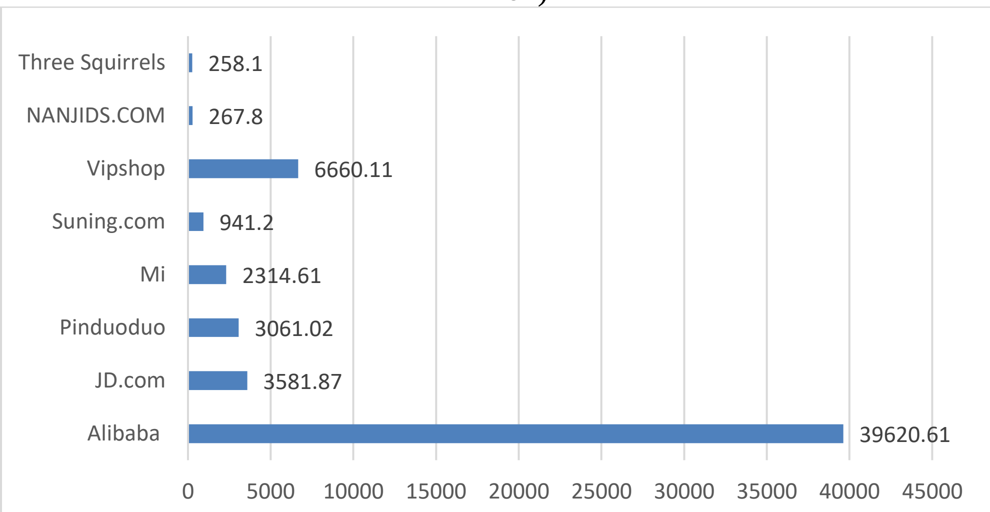
Another core pillar of e-commerce progress is the boom of logistics industry. According to public data, the scale of China's social logistics was ¥177.3 trillion in 2012. By 2019, China's total social logistics will reach ¥298 trillion. It shows an increasing trend year by year. Based on the classification of logistics mode of e-commerce enterprises, it can be divided into third-party logistics service and self-established logistics service. After fierce competition among Chinese third-party logistics enterprises, YTO Express,[13] ZTO Express,[14] STO

[7] From: https://baike.baidu.com/item/8848/846311
[8] From: http://www.suningholdings.com/cms/en/index.htm
[9] From: http://www.gome.com.hk/html/ir_presentation.php
[10] From: https://en.wikipedia.org/wiki/Alipay
[11] From: https://www.tenpay.com/
[12] From: https://en.wikipedia.org/wiki/WeChat
[13] From: https://www.yto.net.cn/English/en/index.html
[14] From: https://zto.investorroom.com/

Express[15] and YunDa Express[16] have rapidly grown into e-commerce express suppliers. JD is the most representative enterprise with a self-established logistics distribution mode. This has also become the competitive advantage of JD to transformation from offline to online.

According to Figure 3, the chart ranks the market capitalization of these retail-oriented e-commerce enterprises. As of December 31, 2019. Conversion at point-of-time exchange rates. Alibaba Enterprises led the way with a market capitalization of ¥3,962.06 billion. JD has a market capitalization of ¥358.18 billion. Pinduoduo ranks third in market capitalization, with a total of ¥3,061.02 billion. Suning is the fifth largest by market capitalization.

Figure 3 Market capitalization statistics for China's e-commerce companies (Unit: ¥100 million)



	Alibaba	JD.com	Pinduoduo	Mi	Suning.com	Vipshop	NANJIDS.COM	Three Squirrels
market value	39620.61	3581.87	3061.02	2314.61	941.2	6660.11	267.8	258.1

Source: http://www.100ec.cn/zt/2019ssgsbg/

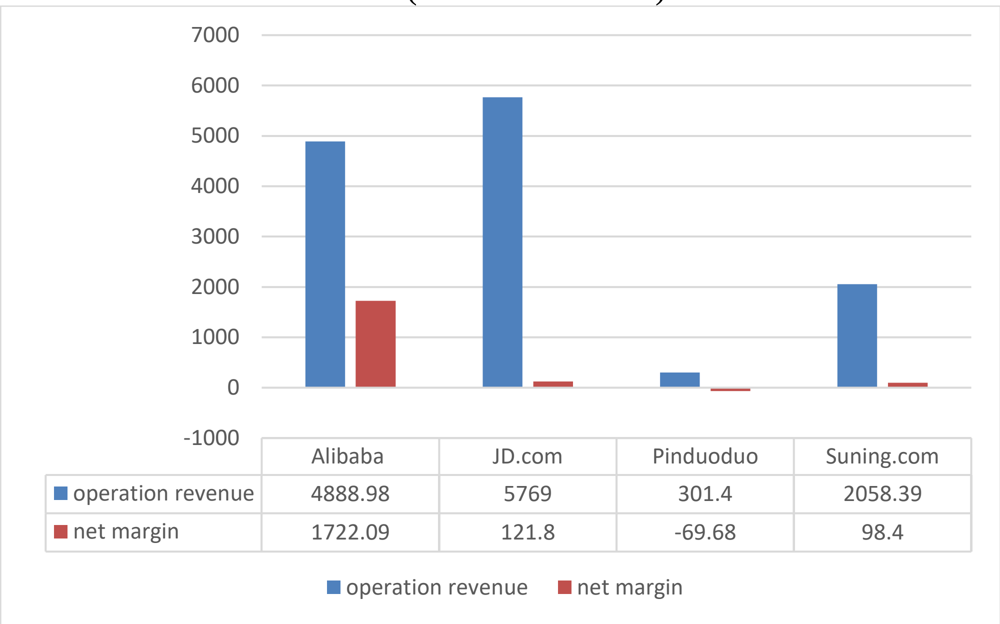
Among the most valuable e-commerce companies, the author chose four companies with similar businesses. The four companies are Alibaba, JD.com, Pinduoduo and Suning. Analyze the operating income and net profit of these four enterprises in 2019. Alibaba's net profit of ¥1,722.09 billion was far higher than that of any other company. This has to do with its wide range of business. Founded in 2015, Pinduoduo is a relatively new company. Group purchase, low price is its attractive label. But its financial indicators are not good, although it is growing very fast. Its net profit was still negative in 2019.Therefore, in the index analysis and comparative analysis in the fourth chapter, this paper does not take Pinduoduo as one of the enterprises for horizontal comparison. Suning is the representative of traditional e-commerce.

[15] From: http://www.sto.cn/

[16] From: http://www.yundaex.com/cn/index.php

In China Suning's offline mall is more recognized. In 2019, Suning's net profit was ¥98.4 billion, far behind Alibaba, but not far behind JD's net profit of ¥121.8 billion. Therefore, Suning is one of JD's strong competitors.

Figure 4 The operating income and net profit of listed companies of major retail e-commerce in 2019 (Unit: ¥100 million)



Source: http://www.100ec.cn/zt/2019ssgsbg/

2. The case

2.1 JD

2.1.1 Introduction of JD

JD, a Business to Customer (B2C) company in China, is the largest online retailer in the country. JD.com is a China concepts stock,[17]which means that Chinese companies have successfully listed in the United States. It was listed on NASDAQ in May 2014.

According to JD's official information, its vision is to become the most trusted company in the world. In its mission, it refers to technology as the fundamental driving force for a more productive, sustainable world. As with all service companies, customers are still the priority for JD.[18]

In 2019, the latest performance show that JD's net profit reached a record high of ¥576.9 billion. The net profit attributable to ordinary shares accounted for 2.11%. The research and development investment in the outlays is noteworthy, totaling ¥17.9 billion. This lets the investors see JD in the technology research and development aspect investment is not small.[19]

Richard Qiangdong Liu,[20]founder, chairman and CEO of JD Group. His age is 47 years old. He is an alumnus of Renmin University of China. From September of the same year to May of 1998, he worked as a distributor in Beijing branch of Shenzhen Riborolai Company, a Japanese enterprise. On June 18, 1998, he rented the counter agent to sell optical and magnetic products in Beijing, and established JD Company as the general manager. In early 2004, he started an e-commerce business. And the establishment of JD's predecessor, known as JD Multimedia Network.

“A technology service enterprise based on supply chain” is JD's positioning for itself. The main businesses include e-commerce, logistics, digital technology, and technical services. Other aspects of the business are also within the strategic layout, such as insurance, health, international business, cloud computing, AI, etc. It can be said that JD's business development is diversified. JD has more than 387 million[21] active customers and offering them a full range of goods has been its strategy. As a result, they are trying to establish global standards for the

[17] From：https://en.wikipedia.org/wiki/China_concepts_stock
[18] From: https://corporate.jd.com/missionValues
[19] From: Annual report of JD in 2019
[20] From: https://en.wikipedia.org/wiki/Liu_Qiangdong
[21] From: https://ir.jd.com/

online shopping experience. JD's supply of products has also expanded from the original electronic accessories to clothing, furniture, electrical appliances, fresh food and so on. At present, one of JD's attractions to customers is its own products and brands. Customers have next-day and same-day delivery. This benefits from JD's data processing technology and logistics network. JD and Alibaba play a comparable role in promoting international brands into the Chinese market.

2.1.2 The history of JD

In 2004, JD transformed from an offline enterprise to an online one. The products with rich categories, excellent quality and fast and convenient logistics service have won the trust of many consumers. In 2013 and 2014, respectively, they occupied 46.5% and 49% share of self-operated electric shopping malls in China. In 2015, the proportion was as high as 56%.[22]JD's record of important events is shown in table 1. [23]

Table 1 Historical events in the development of JD

Year	Events
1998	JD company was founded and sold digital products in Beijing.
2000	JD expands 12 brick-and-mortar stores.
2004	JD is transforming its business to online
2007	JD received ¥10 million investment from CAPITAL TODAY. JD has started to build its own logistics system.
2010	JD opened its platform and became an online retail enterprise with a scale of over ¥10 billion.
2011	JD announced that it has terminated its cooperation with Alipay.
2013	JD officially changed its name to JD and launched "JD Payment".
03/2014	JD has reached a strategic cooperation agreement with Tencent.
05/2014	JD is listed on Nasdaq.
04/2015	The global purchase cross-border e-commerce platform went online.
06/2016	Walmart becomes strategic partner of JD.
04/2017	JD established JD Logistics.
2017	JD has launched projects such as "Unmanned Supermarket".
06/2020	JD chose to re-list on the Hong Kong Stock Exchange.

Obviously, JD has its own strategic development advantage in. It has accurate positioning for target customers. Its long-standing marketing strategy also fits the target market. JD has strict requirements on customer service. The large investment and construction of self-established logistics system have formed a unique advantage to JD. From these four

[22] From: https://ir.JD/annual-reports
[23] From: https://corporate.jd.com/ourHistory

aspects, JD has gradually formed its own development advantages in the process of adapting to the market development.

In the choice of the target customer, JD initially targets customer orientation on the role of electronics enthusiasts. Accurate positioning allows JD to leave a professional first impression on customers. Lots of customers choose JD to buy electronic products. Now JD slowly expanding its product categories. The product category is becoming more and more complete. Another point of concern is that JD pays more attention to young people in cultivating its future customers. JD is not just focused on middle-aged consumers who have a higher income. However, JD has also set its sights on young people who have just entered society or are still in college. JD promotes young people's consumption through low prices and subsidies. To attract more consumers, JD initially adopted the strategy of selling goods at a low price. Later, JD implemented a subsidy marketing strategy aimed at attracting consumers. After this process achieves a large volume of sales, JD can rely on merchants to return points and other ways to make profits. In the process of carrying out new marketing strategies, JD has been continuously cultivating consumers' shopping habits to build a kind of loyalty. JD lays the foundation for long-term customer acquisition.

Online and after-sales services are also worth mentioning. Starting from the perspective of consumers and protecting their rights and interests, JD has launched measures to strengthen the establishment of a credit system and provide a better consumer experience for consumers. These measures include "price protection" and "extended warranty service". JD not only emphasizes online service, but also pays more attention to after-sales service management. It can pay cash on delivery. JD also has another program to guarantee consumer services. When customers need return service for some reason, JD offers free door-to-door services within a certain range. Some products can now be returned within seven days without any reason. This service caters to the needs of consumers who buy on impulse or by mistake.

JD attaches great importance to the self-established logistics system. JD logistics system mainly adopted B2C this model. JD logistics system is based on the mall. When consumers place an order at JD. JD will ship goods immediately from a warehouse center closest to consumers. JD logistics and traditional multi - line logistics comparison. JD logistics is a single-line operation based on the warehouse center as the starting point and consumers as the endpoint. In this way, warehousing as the center, radiation in all directions, can greatly improve the efficiency of logistics distribution.

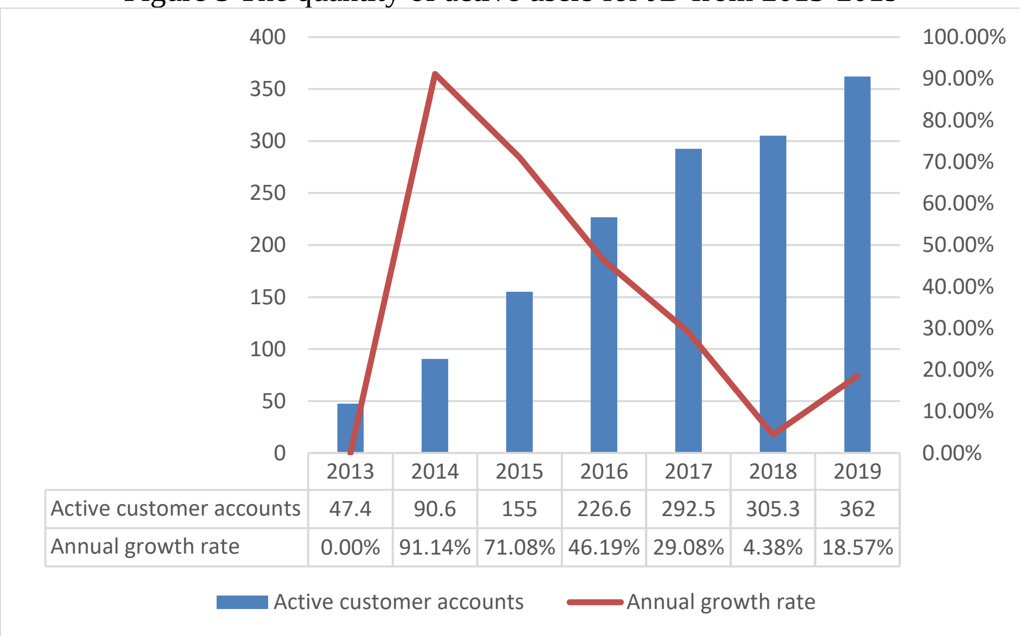
2.1.3 The operation of JD.

In the process of development, JD has been expanding its business scope. JD has won its own competitiveness in the e-commerce competition. JD business scope covers household electrical appliances, digital communications, household decoration, daily provisions, clothing accessories, maternal and child department, books, audio and video, food fresh, auto parts, beauty makeup and other traditional commodity categories. JD has other financial services. JD can also provide customers with credit service, auctions, real estate, second-hand goods and other financial services. JD has gradually expanded its business areas and realized a diversified strategic pattern. JD also gained great popularity among consumers with its excellent product quality and high-quality delivery services.

(1) Analysis on the number of active users of JD

According to the financial data of JD, as shown in Figure 5, the number of active users on JD has grown rapidly from 47.4million in 2013 to 292.5million in 2017. The number of active users on JD reached 305.3million in 2018 and 362million in 2019. JD is an Internet company. Active users are a measure of customer service performance. As can be seen from figure 5, In 2014, the annual growth showed an explosion, reaching 91.14%. From 2015 to 2018, the annual growth rate of active users declined each year. But it achieved an annual growth rate of 18.57 percent in 2019. The continuous expansion of a customer base indicates that the brand attraction and brand value of JD are constantly improving.

Figure 5 The quantity of active users for JD from 2013-2019



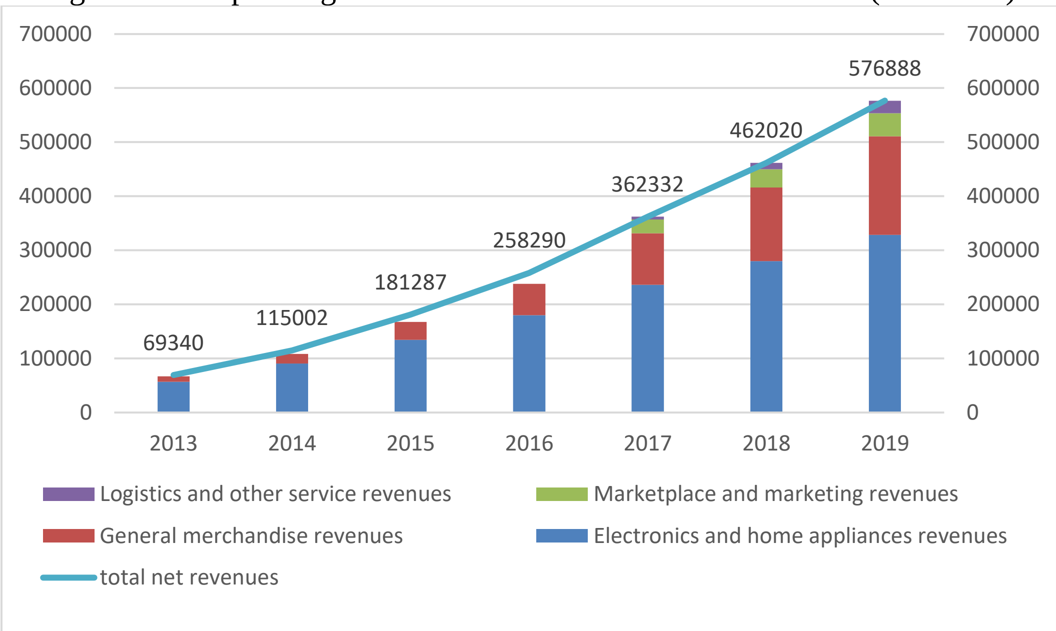
	2013	2014	2015	2016	2017	2018	2019
Active customer accounts	47.4	90.6	155	226.6	292.5	305.3	362
Annual growth rate	0.00%	91.14%	71.08%	46.19%	29.08%	4.38%	18.57%

Source: Annual report of JD

(2) The operating revenue structure of JD

According to the public data collation, as shown in Figure 6, the operating revenue of JD has increased from ¥69340 million in 2013 to ¥576,888million in 2019. That's a sevenfold increase. From the perspective of revenue structure, electronic sales revenue has always been the main source of revenue for JD. The logistics and other services revenues began generating revenue which was established in 2017. The revenue of logistics and other services reach ¥234,744 million in 2019.

Figure 6 The operating revenue structure of JD from 2013-2019 (in million)



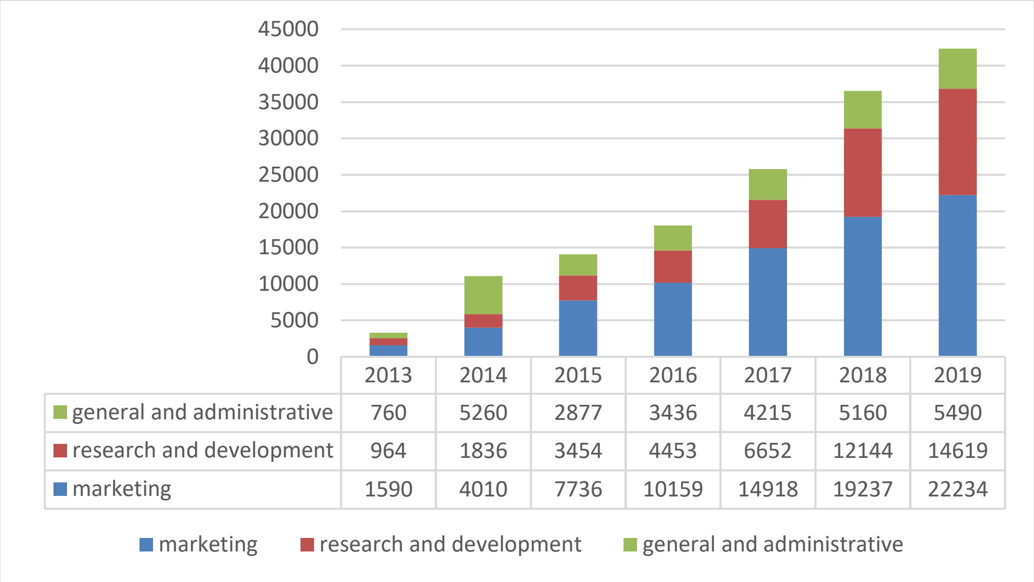
Source: Annual report of JD

(3) The operating expenses of JD

JD's revenue has grown rapidly in recent years. However, the growth of revenue is due to the investment in the early strategic layout. JD has the most competitive advantage in logistics. The infrastructure construction of logistics and warehousing lead to a large amount of capital expenditure every year.

After sorting out the historical data of operating expenses, the operating expenses of JD are also in a state of continuous growth, among which the market expenses account for more of the operating expenses. The rate of increase in research and development spending has also been increasing year by year. Research and development spending were ¥964 million in 2013. By 2019, the target had increased nearly 14-fold to ¥14619 million.

Figure 7 The operating expenses of JD from 2013-2019 (in million)



Source: Annual report of JD

(4) Logistics System of JD.

The strategic layout of logistics for JD is very important. It follows the progress of E-commerce in China. JD logistics has also laid an important foundation to win customer reputation and establish its market position. This paper combs the progress of JD logistics. [24]

Table 2 Historical events in the development of JD logistics

Year	Events
2007	JD has begun to build a logistics system. JD provides financing for the preparation.
2009	JD has seven major logistics centers in China. JD logistics is up and running.
2010	JD proposed "211 delivery mode". If customers place orders before 11 p.m., JD makes sure the goods arrive by 11 a.m. the next day.
2012	JD warehouse covers an area of over 100 square meters
2013	JD has more than 1,000 distribution points and 430 self-pick-up points
2014	JD has built seven logistics centers and 119 large and medium-sized warehouses, covering an area of more than 2.4 million square meters.
2015	JD has invested heavily in building a modern warehouse in Asia.
2016	A total of six Asia warehouses have been put into operation in China.
2017	JD Group officially announced the independent operation of JD Logistics
2019	JD has regional distribution centers in 7 key cities in China. Its front-end distribution centers are in 28 cities. The warehouse has locations in 54 cities. As of Dec 31, 2019, JD had 175,954 employees in charge of warehouse management and logistics delivery.

The service modes of "211-time delivery", "next day delivery" and "night delivery" proposed by JD Logistics have been favored by consumers. From the perspective of

[24] From: https://ir.JD/annual-reports

geographical distribution, JD Logistics has covered most of China. JD Logistics is also actively exploring distribution channels and methods such as community cooperation, convenience store cooperation and campus cooperation, striving to become a leading large-scale logistics distribution group in China.

(5) Supply networks of JD

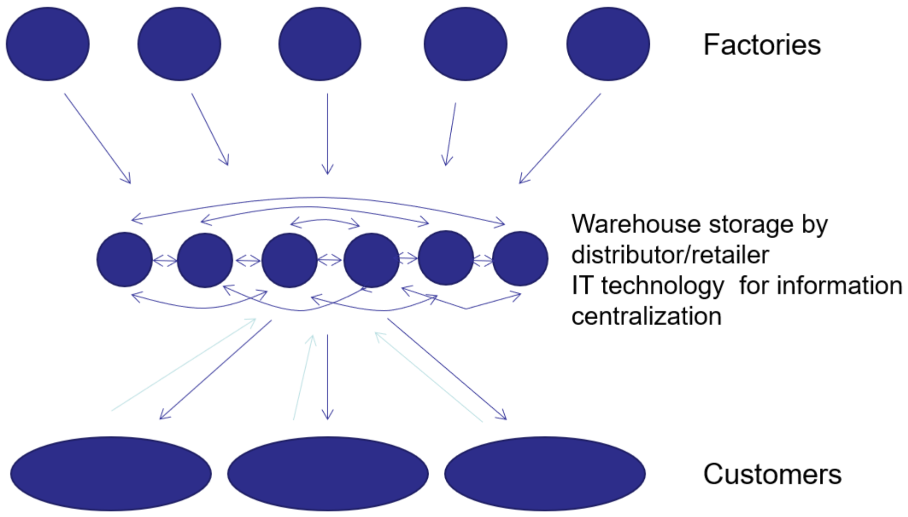
In the traditional e-commerce supply network design, customers can experience a wider variety of products at lower prices. However, they must endure longer logistics waits. Retailers are also facing problems such as delayed allocation of goods and shortages. In a more flexible e-commerce supply network, retailers set up more distribution centers and small-scale fee delivery stations and integrate the data and services of distribution centers with big data management to form a more mature supply network. Integrating agility into the distribution system solves trade-offs and improves efficiency. Referring to the research model Chopra and Meindl (2015), This paper analyzes JD Logistics from four aspects of cost factors and seven aspects of service factors.

Table 3 Analysis of JD logistics system

Cost factor	Performance
Inventory	More small distribution stations and distribution centers than traditional systems.
Transportation	Lower than traditional systems because it's closer to the customer. But for custom products the cost will not be reduced.
Facilities and handling	Slightly larger than the manufacturer's storage. There are differences for heavy or large goods that are not easy to transport
Information	Artificial intelligence and IT technologies are used to plan information centralization to serve the supply network.

Service factor	Performance
Response time	Centrally managed takes less time than traditional systems.
Product variety	More variety than traditional systems.
Product availability	More efficient product availability can be provided as a result of the concentration of manufacturers.
Customer experience	Superior to factory storage and traditional systems.
Time to market	Ahead of factory storage and traditional system.
Order visibility	Easier to obtain than factory storage and traditional systems.
Returnability	Recycling the goods while the couriers deliver them is more convenient than manufacturers and traditional systems.

Figure 8 Supply networks model of JD logistics system



2.1.4 The risk of JD

(1) Management risk

With the continuous development of JD Logistics, the management difficulty is gradually upgraded. This is also the disadvantage of self-established logistics relative to third-party logistics. For example, in terms of warehouse management, with the increasing area of warehouses in various places, JD Logistics faces more and more challenges in warehouse management. In particular, the poor logistics and storage conditions in rural areas are in urgent need of improvement. Besides, due to the service "7 days no reason to return or exchange". A part of the goods throughout the year in the storage centers around the country to return. In terms of the distribution process, the distribution process of JD Logistics presents obvious supply chain characteristics. The over-reliance on express delivery in the logistics process is due to the time-consuming and laborious process of obtaining data and information from upstream suppliers. This means that the allocation process is error prone. In general, JD Logistics focuses on efficiency. To ensure delivery efficiency, JD is likely to have the problem of a high empty load rate in logistics. Therefore, vehicle transportation will cause a waste of resources in the case of the excessive pursuit of distribution efficiency.

In terms of human resource management, under the rapidly expanding demand, JD needs more and more warehouse sorting employees and couriers. To find many labors in a short time, JD's front-line employees have problems such as unbalanced quality, inadequate training and high mobility. This affects the service evaluation of JD to some extent. Couriers commonly complain of stress and low pay. Especially in major festivals, JD Mall grabs the market for promotion, thus facing huge orders. While the eye-catching sales results appear in the news, the media and the public are also concerned about whether the workers' rights and welfare are guaranteed.

(2) Financial risk

A lot of external financing was used to build JD Logistics. This undoubtedly increases the financial risk of JD. The net profit has been in negative territory for years, largely because of the huge annual costs of managing logistics, marketing and repaying interest. To speed up delivery and achieve intraday delivery, JD chooses locations far from city centers to deploy large warehouses, which require it to pay high rents and take the risk of a land policy. JD Logistics provides supply chain financial services to merchants registered on JD Mall. JD also offers credit services to customers. This lengthens the cash flow cycle. Any enterprise in the e-commerce industry long-term and large investment means high risk.

2.2 The corporate governance structure of JD

2.2.1 The shareholding structure of JD

The development of any enterprise is inseparable from the support of capital. This is especially true for e-commerce enterprises. E-commerce enterprises often need a large amount of capital as the backing of development. JD has attracted multiple investors from the start with the bright prospect of an e-commerce market. With the financing process, JD initially chose preferred stock financing. JD completed its first-round financing in 2007, and its second-round financing in 2009, and the third-round financing in 2010. These operations helped JD raise $169 million. These funds were used to build a logistics and warehousing system. These operations also mean that the control of the company has not been affected.

Later, preferred stock financing could no longer meet the needs of rapid development. JD chose to issue common shares. In April 2011, JD successfully raised the first common stock financing worth $746 million from Russian investment company DST. At the same time, the momentum of the rapid development attracted Tiger Fund, Sequoia Capital and other famous capital investment companies. In the end, JD sold 449 million common shares. JD got $1.643 billion. This fund mainly spent on logistics system construction and technology research and development. In November 2012, JD received $300 million from OTPP and Tiger Fund for the operation of the company. In February 2013, JD sold a total of 800 million ordinary shares to the Ontario Teachers' Retirement Fund of Canada and Saudi Arabia's Kingdom Holding. JD completed a total of $700 million in common stock financing.

After several rounds of large-scale financing, JD has alleviated the lack of funds. In 2014, JD decided to go public and took a series of strategic actions. In March 2014, Tencent invested $215 million. The investment gave Tencent a 15% stake. JD has owned online marketplaces such as PaiPai and QQ online Shopping, which are owned by Tencent. The two sides have established a long-term strategic partnership of cooperation. In April 2014, JD divided its business into JD Mall Group, JD Financial Group, PaiPai and overseas business division. In May 2014, JD Group went public on Nasdaq, raising $1.78 billion.

According to table 4, JD had a "one share, one vote" share structure of 2458 million common shares outstanding before the IPO. Richard Qiangdong Liu and his team hold 463 million shares, or about 18.8%. Under the "one share, one vote" rule, Richard Qiangdong Liu and his team would have no control over the business and strategics of the firm. A voting trust emerges from JD's prospectus. When Mr. Liu and his team hold less than 20% of the shares, that corresponds to more than half of the voting rights. This cannot be considered a long-term solution. Mr. Liu and his team's grip on JD remains precarious.

Table 4 The shareholding structure of JD before IPO in 2014

	Ordinary Shares Held Prior		Ordinary Shares Beneficially Owned Prior	
Directors and Executive Officers:	Number	%	Number	%
Richard Qiangdong Liu	369,564,379	18	929,525,418	46
All Directors and Executive Officers as a Group	369,564,379	18	934,174,030	46
Principal [and Selling] Shareholders:				
Max Smart Limited	369,564,379	18	813,461,558	40
Entities affiliated with Tiger Global Management	445,272,385	22	445,272,385	22
HHGL 360Buy Holdings, Ltd.	318,962,191	16	318,962,191	16
DST Global funds	225,744,465	11	225,744,465	11
Best Alliance International Holdings Limited	191,894,000	10	191,894,000	10
Fortune Rising Holdings Limited	106,850,910	5	106,850,910	5
Kingdom 5-KR-233, Ltd. managed funds	100,988,642	5	100,988,642	5
Sequoia Capital funds	39,821,655	2	39,821,655	2

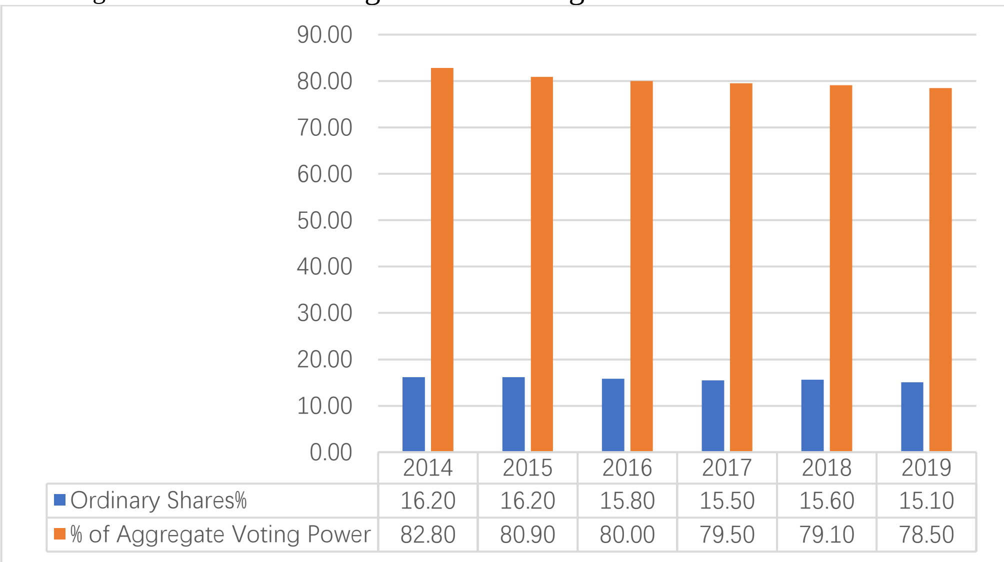
Source: Annual report of JD

JD no doubt wants to prevent further dilution of its control. JD's dual-class share structure refers to 2177 million Class A shares and 556 million Class B shares. But Class A shares and Class B shares 1:20 rights in voting ratio. That leaves Mr. Liu and his team with 20.66% of the shares and 83.7% of the votes after the IPO.

On May 25, 2014, JD went public on NASDAQ with a market value of about 25.7 billion yuan. On June 18, 2020, JD raised capital second time with a price of 226 Hong Kong dollars. It issued about 133 million ordinary shares, raising a total capital of nearly 30 billion Hong Kong dollars.

As shown in the figure 9, since 2014 when JD went public, Richard Qiangdong Liu and his team have held a high proportion of voting rights in JD, which is equivalent to grasping the control right of JD. As can be seen from the 2014-2019 shareholding structure change of JD, the dual-class shareholding structure has always been adopted by JD, and no significant changes have taken place.

Figure 9 the shareholding structure changes from 2014 to 2019 of JD



Source: Prospectus of JD.

As of the end of 2019, founder Richard Qiangdong Liu and his team owned 15.10 percent and 78.60 percent of the voting rights. The remaining major shareholders include Huang River Investment Limited, Max Smart Limited, Walmart and Fortune Rising Holdings Limited. They hold 17.90%, 14.80%, 9.80% and 1% share, respectively. Among them, Max Smart Limited belongs to Richard Qiangdong Liu and has 73.40% voting rights. The three remaining major shareholders hold just 12.2 % voting rights. JD is still under Mr. Liu's control.[25]

2.2.2 Directors and management layer of JD

(1) Directors of JD

The company's board size was five before it went public in 2014. The audit committee, compensation committee and nominating and corporate governance committee are the three committees established under the board of directors of JD.[26]In the prospectus of JD, under the

[25] From: https://ir.JD/annual-reports - 2019 P.129
[26] From: https://ir.JD/annual-reports - 2014 P.126

provisions of the Memorandum of Association and Articles of Association. If Richard Qiangdong Liu is no longer a director, the board will not be a quorum. For that reason, Richard Qiangdong Liu is crucial to JD's board. If Richard Qiangdong Liu is absent for unusual reasons, the board will be unable to make normal decisions. The situation is seen as a risk to JD's board governance. Table 5 summarizes the size and structure of directors from 2013 to 2019. Compared with the implementation of dual-class share structure, there is no change in independent directors. The total number of directors has grown from four to five. Since then, the total number of directors has remained the same.

Table 5 The directors of JD

	2013	2014	2015	2016	2017	2018	2019
Directors	4	5	5	5	5	5	5
Independent directors	3	3	3	3	3	3	3
Proportion of independent directors	75%	60%	60%	60%	60%	60%	60%

Source: Annual report of JD.

(2) Management layer of JD

JD's permanent executives include the chief executive officer of JD Retail, chief financial officer, chief executive officer of JD Logistics, and chief compliance officer.[27]According to JD's public data and announcements, the disclosure of management changes is timely and effective. As of the end of 2019, JD had 10 directors and senior managers. The median age was 49. The influence of management incentive on the enterprise is very important. It is noted in this paper that there are GAAP financial statement data and non-GAAP financial statement data in JD. But the main difference lies in whether the share-based compensation is included in the expenditure, thus affecting the profit. JD's equity incentive mainly aims to stimulate corporate performance, attract, and retain talents, and promote the development of JD's business.

According to the 2014 annual report of JD, before going public, JD's equity incentive amount was ¥261 million at 2013. On December 31, 2014, after JD went public, the equity incentive amount was ¥4.250 billion. That is related to an estimated $591 million in share-based compensation awarded to Richard Liu in 2014. JD's board of directors approved a decade-long compensation plan for Liu in May 2015. He will receive a cash salary of ¥1.00 per year and a zero cash dividend on 26 million Class A common shares with an award of 10% for each anniversary. There will be no additional equity incentive for ten years. In the following year, JD equity incentive policy gradually increased. In December 2017, December

[27] From: https://ir.JD/annual-reports - 2019 P.120

2018 and December 2019, the total share-based compensation of JD was ¥2.78 billion, ¥3.66 billion, and ¥3.695 billion respectively.[28]The implementation of the management equity incentive policy make JD increase the strength of equity incentive to improve the incentive level of the management.

2.3 Case Questions

An in-depth analysis of the relevant literature and data available to us. This paper also considers filling the gap in the current research literature on JD dual-class share structure. The main research issue and sub-issues of this paper are as follows:

Main research issue:

-What suggestions can be given to JD under the dual-class shareholding structure?

Sub-issues:

- What factors stimulated JD to adopt the non-one-share, one-vote system?

- How is the performance of JD after the implementation of dual-class share structure?

- What are the troubles of JD under dual-class shares? What are the issues related to corporate governance?

- What are the more appropriate suggestions to give to JD or similar enterprises?

[28] From: https://ir.JD/annual-reports - 2019 P.29

3. Pedagogical Note

3.1 The target audience of case

This case serves students majoring in business administration and financial accounting. Other users of this article include e-commerce managers and corporate managers responsible for the IPO and shareholding structure of their companies. This paper also provides case reference for scholars studying dual-class share structure.

3.2 Pedagogical Goals

Constructing a relatively complete case study is the primary significance of this paper. Secondly, students of related majors or professional managers can generate more ideas on the application of dual-class share structure by combining the typical cases of JD. The case study also has the following other teaching objectives:

(1) This article helps readers understand the past and current situation of the progress of e-commerce in China. This paper introduces the outstanding enterprises born in the progress of E-commerce in China.

(2) Through the detailed introduction of the case of JD, this paper analyzes JD from three aspects: finance, logistics and equity structure. This article can help learners understand the strengths and weaknesses of the strategy of JD.

(3) This paper gives the characteristics of JD's business development and the results of equity structure analysis to readers. This paper analyzes the motivation and reasons of adopting the two-tier structure of JD. This paper also uses the financial analysis method to summarize the financial performance of JD. The author discusses the existing problems and suggestions of corporate governance of JD based on dual-class share structure.

3.3 Literature review

3.3.1 Dual-class share structure

(1) The definition of dual-class share structure

The acceptance of dual class share structure varies widely in different countries or regions (Aurelio, 2019). Dual class share structures are more common in the US, Canada, Switzerland, Denmark, Norway and so on than in the UK, Germany, France, and Chile. This chapter will first make a general explanation of the concept of dual-class share structure and its manifestation.

According to the research conclusions of DeAngelo (1984) and others, these studies analyzed the basic characteristics of dual-shareholding companies. It is mainly applied to family-controlled companies or companies controlled by a small number of people, focusing on those companies with good growth potential (Ben and Brian, 2001). They usually have the high value and low debt (Taylor and Whittred,1998), highest growth rate (Lehn et al. 1990). For example, distributed industries are dominated by communications, business services, media, and machine manufacturing. Meanwhile, in the United States, dual-class companies generally outperform single-share companies in terms of asset size and longevity (Amoako-Adu et al. 2014).

Usually a dual-class share structure is a share structure in which a firm issues shares that represent inconsistent voting rights and the founders prevent the voting rights from being diluted in the financing process by holding shares of high voting rights, to realize the strong control over the firm by the founders (Kristian, 1992). The birth of non-one-share, one-vote system benefits from the progress of the modern capital market and is the result of a mutual game between investors and founders. As defined in the previous dual-class share structure. The structure consists of Class A and Class B units with the same basic rights. There are, however, three aspects that distinguish the two types of shares (Howell, 2017).

Holders: A - class shares and B - class shares in the holding body is not the same. Class A shares are generally held by the founders or management as specified in the Articles of Association. Major investors and outside public shareholders own Class B shares.

Voting rights: The establishment of voting rights is inconsistent. In A common form, for example, ten voting shares represent each Class A share and one voting share represents each Class B share.

Conversion rights: In the event of A transaction, transfer, or transfer of control of A company, the Class B common stock will not be convertible from Class A common stock to Class B common stock. But Class B shares can be converted with Class A shares, which have high voting rights. Through the institutional arrangement of different voting share structures, enterprises through the transfer of shares can connect external resources on the one hand, and achieve effective control of the company's founders and management through the correct voting design of the "bipolar differentiation" on the other hand, to prevent hostile takeover.

(2) The character of dual share structure

Whether to separate voting rights from cash flow rights is an important issue for companies (Howell, 2009). The company needs to consider the influence of such factors as equity diversification, investor type and capital structure. However, according to the actual situation and the research results of scholars, the adoption of dual share structure in some specific industries or companies with certain characteristics will be more common (Chemmanur and Jiao, 2012).

According to the industry distribution data of listed companies in the US, dual-class companies are mainly concentrated in the media industry (The New York Times, etc.), family companies, high-tech companies (such as Facebook, Google, etc.). The reasons behind this are not hard to understand. Due to the demand for the unique style of publication or the pursuit of fair and objective value, media enterprises often need stable control system arrangements. For enterprises with family as the operating unit, the rise and fall of the family is closely related to the control of the enterprise, and the founder must firmly grasp the control. Therefore, Founders or management have a deeper desire to control the company. They are more willing to use a dual-class share structure to maintain or strengthen control of the company (Smith et al. 1999).

In the 1980s, Hostile takeovers are on the rise in the US market. Firms are starting to look at dual-class shares as a way to deal with barbarians. However, there are many anti-hostile takeover methods, such as the "golden parachute" clause that provides high one-time compensation to senior executives when the control right changes, and the "poison pill" plan that fully controls the company by issuing large amounts of shares at a low price and protecting the company. However, most enterprises are inclined to use dual-class share structure both in terms of implementation effect and cost (Coates, John C, 2002). Ronald J Gilson (1987) tends to use a dual-class share structure of the firm can be divided into two categories: “Question marks” and “Cash cows”. The first type of company is mainly in the stage of rapid development. Enterprises in the initial period of capital shortage is more serious. The purpose of adopting this shareholding structure is to obtain the funds needed for the development of the enterprise while retaining the founder's control. The second category of companies, the "cash cow" company, is in a mature industry and can rely on steady revenue growth to generate enough cash flow. But the management of such companies may have conflicts of interest with investors. The firm needs to improve the discourse power of the internal shareholders. To safeguard its effective control over the company. To avoid the value difference between internal and external shareholders to endanger the stable development of the company (Ronald J Gilson,1987).

Andrew and Charles (2012) analyzed the dual share structure of Google company for inquiry. They think the investors to invest in Google will lower and founding team has such problems as an authoritarian phenomenon, is caused by dual class share structure. The founding team has less equity but has accounted for more voting rights. It appealed a negative influence. So, he had opposed to dual-class structure. Fischel (2014) offers a discussion from the perspective of agency costs. He believed that the residual interest that investors can enjoy in a company should be related to or proportional to its voting rights, and one share can only represent one right, otherwise, the agency cost will increase continuously. Ting and Nataliya (2017) analyzed the sample data of 19 countries and concluded that the information environment had a certain influence on the choice of dual ownership structure. Adhikari et al. (2018) analyzed 4,795 companies from 1985 to 2003 and believed that the choice of dual share structure would have an impact on future corporate mergers and acquisitions.

Greiner et al. (1998) introduced the theory of corporate growth cycle and believed that dual ownership structure could reduce the frequency of manager replacement. To help companies safely pass through the transition period between two stages and achieve stable development. Daniel R. Fischel et al. (1987) regarded double equity as a rational form of contract, which is conducive to the long-term value growth of the company and the increase of shareholders' income under certain conditions. Jordan (2016), from the perspective of internal management, suggested that the implementation of dual-class structure plays a positive role in avoiding management problems. This structure alleviates pressure from capital markets and allows management to concentrates on long-term strategy without worrying too much about losing control. Dimitrov (2006) compared the performance of companies with dual-share structure and one-share, one-vote structure and found that the former was not worse than the latter, and even showed stronger growth, from which investors could also get more abundant investment returns. The research of Amoako-Adu et al. (2014) on enterprise life also proves this point. He chooses the 318 listed companies and used the traditional single ownership structure of firms. The other sample includes 62 companies with dual share structure. His research concludes that the average life span of dual-class firms is 1.5 times that of firms with single structure. By comparison, the assets of dual-class companies are twice as large as those of companies with one share, one vote.

Some scholars have analyzed the similarities and differences between dual-share structure enterprises from the aspects of founders' knowledge and courage, human and social capital, and influence on the team. They believe that founders generally have extraordinary courage and senior industry background. The founders also have a strong appeal and influence in the enterprise. Founders will actively own intellectual capital, social capital into the enterprise. Lerong H. (2008) believed that enterprises controlled by founders need fewer management incentives to achieve better corporate performance.

3.3.2 Corporate governance theory

The formation of corporate governance theory is accompanied by the organizational form of the company. Looking back on the practice history of corporate governance, East India Company is obviously one of the earliest practice cases. Then Adams, Coase, Williamson, and others gradually carried out a systematic analysis of corporate governance. In China, research on corporate governance mainly starts with the reform of Chinese enterprises. Corporate governance has developed into a discipline. Li (1998) pointed out that corporate governance includes formal and informal, internal, and external systems and mechanisms to achieve the purpose of coordinating the relationship between companies and stakeholders. Corporate governance includes issues of governance structure and governance mechanism. This paper mainly studies the mechanism and effect of external investors on corporate governance.

From the narrow sense of corporate governance theory, namely, corporate internal governance theory. The composition of corporate internal governance can be divided into board governance, shareholder governance, management governance and so on (Weian, Li, et al. 2019). In terms of shareholder governance, major shareholders or controlling shareholders have different positive and negative influences on listed companies and can influence agency cost, earnings management and an enterprise value of listed companies. Controlling and supervising behaviors of major shareholders (Holderness, 2003), with examples of active participation in corporate governance and passive plunder and appropriation. These will become the factors that affect the internal governance of listed companies. Especially in the aspect of the governance of the board of directors, the board of directors serves as the participating strategic management organization of the enterprise. It can not only act as the agent of shareholders but also act as the supervisor and principal of enterprise managers. Therefore, board governance is the key to optimize corporate governance. Research on the board of directors focuses on the structure design of the board of directors, the ability of directors to perform their duties and the scale of the board of directors (Adams et al, 2010). From the perspective of management, the core level design of enterprise operation is still inseparable from the measurement of enterprise management level. The quality and cultivation of management plays a key role in the operation and growth of enterprises. One way to align management with the interests of the business is to incentivize management. Researchers are also interested in how companies make long-term incentives. Other contents of internal governance include the governance of the board of supervisors and the influence of informal internal systems (Weian, Li, et al. 2019).

3.3.3 Agency Theory

The principal-agent theory is an integral part of modern enterprise theory. This kind of research is reminiscent of Adam Smith's famous economic work, The Wealth of Nations, in which he proposed the principal-agent relationship in the joint-stock corporation. Jensen and Meckling (1976) have suggested that the links between agents and principals are essentially contractual relationships. Therefore, it is inevitable that there will be conflicts and contradictions of interests between the agent and the principal. It is precisely this conflict and contradiction in interests that lead to the contradiction between the agent and the principal. This affects the performance of the enterprise. Due to the continuous progress and growth of economic operation and the continuous refinement and clarity of social division of labor, the agency theory has also been constantly improved.

On the one hand, the shareholder or the actual controller has limited time and energy to single-mindedly ensure that the owner invested in the role of the principal can be implemented. On the other hand, in the context of the refinement of the social division of labor, many professional managers with excellent professional abilities have emerged, which also gives rise to better roles to fulfill the mission of agents. Although the above principal-agent behavior is to meet the demand of efficiency maximization, the contradiction between the principal and the agent on the goal is gradually exposed, which can be explained from the perspective of rational economic man. First, shareholders often aim to maximize their investment returns and pursue higher investment returns, such as dividends and bonuses. Secondly, the operator may also have its own goals, such as achieving certain target results or increasing its reputation. Thus, the overall interests of the company are ignored. Even in terms of operation policy and development strategy, the company chooses to execute decision-making projects that can satisfy its interests instead of implementing strategic decisions based on the interests and development of the company. Based on this kind of conflict, "adverse selection" and "moral hazard" gradually evolved in the principal-agent process.

Subsequently, the way of signing contracts appeared in the principal-agent, to reduce the increasing contradictions between the principal subject and the agent subject. Therefore, the appearance of a contract not only standardizes the relationship between the two, but also weakens the contradiction between them. The reason is that in contracts, there are often clauses that restrict the behavior of agents and encourage their performance. These clauses, to some extent, increase the attention of agents to the objectives of principals and meet the demands of principals to some extent. However, the way of signing the contract may also increase the agency cost virtually, which is reflected in the loss of enthusiasm of the principal for the supervision and supervision of the agent, and aggravates the possibility of the agent's pursuit of its interests. Here comes the problem of the "internal controller".

Due to the separation of two rights in modern enterprises, that is, ownership and management. This leads to a separation of residual claims from the decision-making function, thus formed the professional managers and enterprises all the principal-agent relationship between the this is the first kind of principal-agent relation (Fama and Jensen, 1983). The dual ownership structure solves part of the contradiction. However, companies may face greater agency problems as they mature in their life cycles or as dual-class shares are no longer needed (Cremers et al. 2018). Because their compressed voting rights are difficult to shake the controlling position of operators, operators tend to stick to their expectations for the future of the company, formulate and implement strategic decisions, and it is difficult to ensure the interest demands of all shareholders in the short term, increasing of agency costs of other shareholders.

The second kind of principal-agent relationship subjects are major shareholders and minority shareholders. The separation of the right of cash loss and the right of control leads to a principal-agent relationship. Assume that the major shareholder makes use of the advantages of cash flow rights and control rights to do harm to the interests of the enterprise or other minority shareholders. The research shows that the separation degree of control and cash flow rights in dual-class share structure is higher than that in one-share, one-vote structure (Bebchuk et al. 2000). Entrepreneurs lose most of their voting rights through less cash flow. This is exacerbated by conflicts of interest established by shareholders with others. Entrepreneurs control the board of directors and have decision-making power on various issues such as the company's compensation mechanism and incentive mechanism. Once the entrepreneurs abuse control, through the connection transaction benefit expropriation, unreasonable director compensation methods such as damage the interests of minority shareholders, forming a serious principal-agent problem (Masulis et al. 2009).

3.3.4 Stakeholder theory

The theory of interest correlation can be regarded as an extension of agency theory. Stakeholders can be understood as all groups related to the company's operation and development in a broad sense, including not only shareholders and managers, but also interest groups such as the company's creditors, all employees, customers and foreign regulatory authorities (Jones, 1995). Therefore, according to stakeholder theory, the parties of conflict of interest will become more complex. For example, shareholders want to obtain investment income or achieve their strategic goals for the company, managers tend to focus on personal reputation and remuneration, creditors focus on whether the principal and interest of debt can be recovered, and customers may focus on the quality of products or services obtained.

Under the dual ownership structure, the actual control power of the company is often concentrated in the hands of the actual operators. Although the survival and development of a company are related to multiple stakeholders, specific strategic decisions, strategy implementation and other aspects of the business process are still greatly affected by the actual controller. If some stakeholders cooperate, it may infringe on other stakeholders who do not cooperate. For example, the shareholders of the company and the actual operator jointly control the company's financial information to achieve the effect of maximizing their interests.

3.3.5 Asymmetric information theory

In traditional economic analysis, researchers usually assume that information is symmetric, but the reality is that information asymmetry is prevalent in the capital market. To put it simply, different market economy subjects, due to their different economic positions, have access to and access to unequal information in transactions, that is, the so-called theory of information asymmetry (Auronen, 2003). Therefore, the party in the information advantage will make a comprehensive and accurate judgment based on the sufficient information at hand, while the party in the information disadvantage, limited by the lack of information, can only make a judgment based on limited information, so it is likely to make a sub-optimal or even completely wrong decision.

Under the dual ownership structure, most outside investors do not directly participate in the management and operation of the company, they entrust the management right to the operator. The founder or management team is the most important and direct participant in the company's business activities. They can obtain more convenient, more comprehensive and more in-depth information about the company's business conditions. Therefore, compared with the owners of a company, the controlling shareholders, as internal managers, can take the dominant position in the information balance by the unique information they have mastered, and make decisions by using the internal information they have not known to the external shareholders, sometimes at the expense of the interests of other investors. Moreover, the higher the voting power of management, the more unequal the position of owner and manager in the information balance. This means the greater the degree of information asymmetry. This will also lead to the interests of shareholders are more likely to be damaged. The existence of information asymmetry also makes it difficult for the external shareholders to control the operator's behavior through pre-restraint or post-supervision. Therefore, moral hazard and adverse selection will be aggravated, and agency costs will also be increased (Shleifer and Vishny, 1997).

3.4 Research Methodology

3.4.1Methodological approach and methods

(1) Literature review method

Firstly, through Elsevier, library journals, monographs and other resources, the author have read a lot of articles on control right, dual ownership structure and other aspects. The author has extensively collected literature on dual ownership structure from all over the world. The author summarizes the relevant theoretical results and study agency theory, stakeholder theory and information asymmetry theory.

(2) Case analysis method

This article selects JD as the research object. The author uses the annual report of listed companies, stock exchange and other database resources, the relevant data of the case enterprises are collected to give theoretical and practical reference for the research content of this paper. This paper analyses the business and history of JD, the reason for dual share structure and the implementation of profit and risk. This paper also analysis the financial and non-financial results of dual class share structure.

（3）Financial analysis method

Financial analysis is one of the basic methods for enterprise performance analysis. The contents of the analysis include business activities, investment activities and financing activities. Financial analysis can provide information for corporate investors, creditors, managers, and other stakeholders. This information can judge the past and current situation of the enterprise and provide data support for the enterprise's future expectation. This paper mainly uses the ratio analysis method and the comparative analysis method.

Ratio analysis method is to deal with the main data related to the financial report of an enterprise in a period for quantitative analysis and comparison, and then analyze the overall financial situation and business performance of the company. Contrastive analysis can include horizontal comparison and vertical comparison. Horizontal comparison of financial indicators between enterprises and competitors in the industry. Vertical comparison is to compare the significance of the current period's financial indicators with those of the previous level. Vertical comparison index to determine the position of the enterprise in the same industry, to analyze the problems existing in the enterprise itself.

3.4.2 Data collection and analysis

This article focuses on collecting public data. Data were collected from the China Academy of E-commerce Development, the official website of JD, announcements, and financial reports of JD. This paper analyzes the financial data of JD. Combined with supply chain network model. This paper uses financial analysis indicators and makes a comprehensive analysis of the profitability and operational capability of JD.

3.4.3 Limitations of the study

There are the following shortcomings in this paper: First of all, the listed companies that choose dual-class share structure are relatively young when they are established and listed. The amount of data that can be analyzed is limited. Therefore, the research conclusion of this paper may be different from the research results in the future after the sample size and data quantity become abundant. Second, the governance effect of dual ownership structure is more complex. It involves the ownership concentration, the composition of shareholders, the ownership of institutional investors and managers and other corporate governance issues. In this article, the analysis process may not be fully discussed to achieve perfect results.

4. Results

4.1The reason of dual class structure in JD

Enterprises can obtain financial support through external financing. This operation also contributes to the implementation of corporate strategy. For these companies, the constant introduction of outside capital can cause the founding team to lose control. Therefore, the enterprise adopts dual ownership structure. It wasn't hard to see this when JD.com opted for a dual-class share structure to go public, mainly to allow the founders and their team to maintain control of the business. Another important reason is the implementation of JD's long-term strategy. In the later performance analysis, the dual-class share structure of JD does guarantee the strategic layout.

(1) The dual class structure can ensure that the founder enjoys the control right of the enterprise while meeting the expansion needs of the enterprise. For founders, they value the power they have. After completing multiple rounds of financing, the original founders' equity was continuously diluted. As a result, the founder gradually became a minority shareholder and even lost control of the enterprise. For JD, the conflict over control is obvious. In the process of constantly introducing capital, the equity also showed a state of rapid dispersion. Especially after Tencent invested in 2014, the equity share of founder Richard Qiangdong Liu was reduced again.

Tencent acquired 351,678,637 ordinary shares of JD in March 2014. That represents 15 percent of the common stock outstanding outside of JD group before the IPO. Tencent has a higher stake. Tencent has become a major shareholder in JD. This operation makes up the lack of mobile payment. For JD, the industry chain includes e-commerce platforms and logistics platforms. But there is a lack of tools and layout in mobile electronic payments. The micro payments of Tencent can make up for the lack of mobile payments. At the same time, JD has introduced more customer traffic through the social software of Tencent. Tencent has helped JD overcome its shortcomings in mobile payments. Therefore, JD and Tencent have reached long-term strategic cooperation. Tencent, though, has raised money for JD. The founder of JD is also being diluted. The Pre-IPO investment of Tencent laid a foundation for its listing on NASDAQ in the United States, which helped strengthen the capital market's attention to the IPO of JD. This also improves its listing valuation.

When JD made the decision to go public, it also meant that it had to face the result of further dilution of its equity after going public. The shareholding of Richard Qiangdong Liu will continue to fall. The voting rights mandate helped Mr. Liu retain control of the company, but it wasn't a long-term solution. If JD does not make some special arrangements for the shareholding structure, it will continue to abide by the traditional principle of one share and one right. Then whether Richard Qiangdong Liu can continue to maintain control of the company in the future is full of uncertainty and may even face the result of losing control.

Enterprises are constantly introducing funds to improve their competitiveness in the process. The conflict between outside investors and inside investors and founders is becoming more apparent. This conflict is mainly reflected in the struggle for control. The dual-class structure is not formed in a short period, but in the process of development. In the process of continuous financing caused by equity changes, investors and founders in the mutual game are based on the final product. The dual class share structure enables founders to obtain funding support and retain control through the design of different levels of voting rights. That's exactly what the founders did of JD. Before going public, Richard Qiangdong Liu had 19% of the voting rights, making him the largest shareholder. After the listing, Richard Qiangdong Liu has 83.70 % of the voting rights, which equals to 20.68% shares. Control right of JD is firmly in his hands.

(2) JD has been committed to infrastructure construction since its inception. The logistics system of JD crashed in 2009 after a surge in orders. Founder Richard Qiangdong Liu wants to seize the logistics opportunity. In 2011, he proposed a strategic plan: "JD will invest more than $10 billion in the next three years to strengthen the logistics system." This strategic plan is feasible, but it means a steady stream of money is needed. JD has been growing at a breakneck pace but has been generating negative net profits for a long time. The IPO was bound to result in some control being dispersed to other investors. The company's business decisions are also influenced by other shareholders. If investors were not willing to invest heavily in logistics distribution and warehousing system. This could lead to conflict between founders and investors. The company's business decisions would be difficult to unify. From this point of view, if such a situation occurs, it is not conducive to the growth of the company. From the practical experience of JD, the cultivation of the logistics supply chain has grasped one of the core elements of China's e-commerce development. This strategy has made JD stand out in China's competitive e-commerce market.

The implementation of dual ownership structure solves the risk of change of control well. Richard Qiangdong Liu controls 83.7% of the voting rights with a smaller stake. The major strategic decisions for the operation of the enterprise are in his hands. For him, maintaining control of the company also motivates him to continue to be passionately involved in the development of the company and to continue to serve as the spiritual core of the company. At the same time, the smooth implementation of dual share structure without strong opposition also reflects to some extent the recognition and support of external shareholders of JD to the personal ability of Richard Qiangdong Liu. JD has always been adhering to the "customer first" concept and strives to improve customers' shopping experience and sense of pleasure. In the e-commerce industry, the "cash on delivery" payment method and efficient and convenient delivery services have effectively improved customer satisfaction. Without the influence of outside investors, the corporate culture and development strategy formed for a long time can remain stable.

4.2 JD's performance under dual share structure

In this chapter, the author chooses to use the method of financial index analysis and comparative analysis to evaluate the performance of JD over the years. In this paper, the annual report data of JD during the listing period from 2014 to 2019 are selected as the statistical years of longitudinal analysis data. The horizontal comparison selects the 2019 annual report data of Alibaba and Suning, the main competitors of JD in e-commerce business. The partnership system used by Alibaba. The dual-class shareholding system used by JD. Suning uses one share one vote system.

Common financial indicators include profitability ratio, solvency ratio and liquidity ratio. This chapter is based on the business characteristics of JD. Eight indexes, such as net profit margin, ROA, inventory turnover and quick ratio, were selected for analysis. In addition, in order to highlight the analysis of JD's operating capability, this chapter analyzes the inventory turnover ratio and accounts receivable ratio separately. The calculation formulas used in the analysis are shown in Table 6 below. [29]

Table 6 Computational formula list

	Index	Formula
Profitability ratios		
1	Gross Profit Margin	Gross Profit / Net Sales
2	Net Profit Margin	Net Income / Net Sales
3	Return on Assets	Net Income / Average Total Assets
4	Return on Equity	Net Income / Shareholders' equity
Liquidity ratios		
1	Current ratio	Current assets / Current liabilities

[29] From: Weygandt, J. J., Kimmel, P. D., Kieso, D. E., Weygandt, K., & Weygandt, K. (2012). Financial accounting, IFRS edition (pp.719-729).

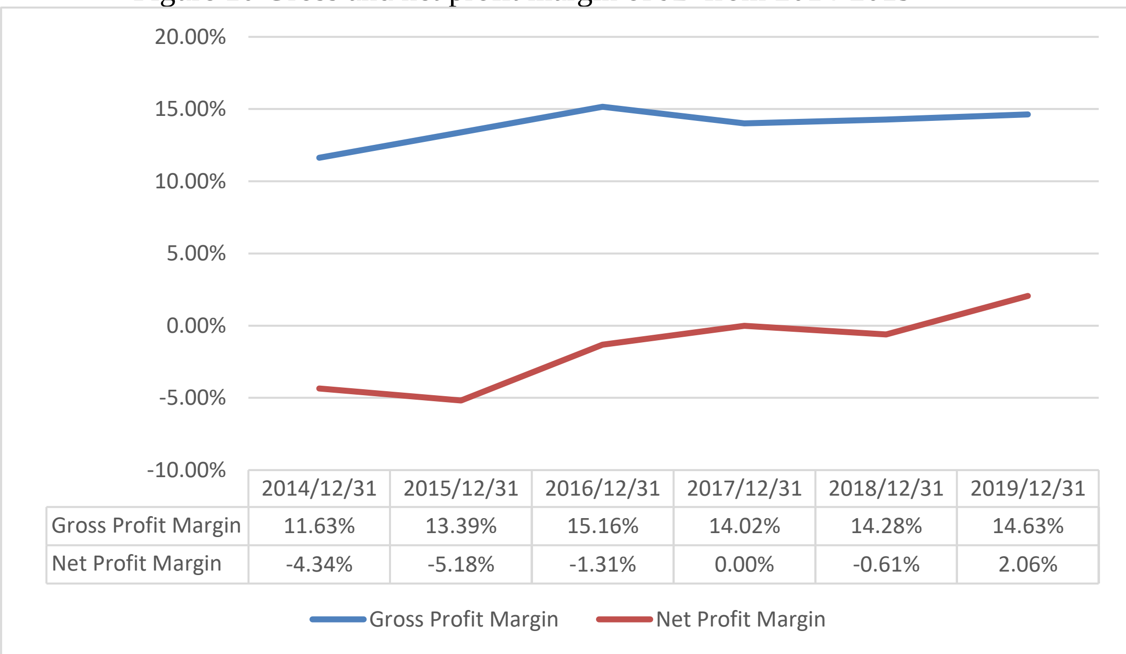
2	Quick ratio	(Cash + Short-term investments + Receivables) / Current liabilities
Operational capability		
1	Accounts Receivable turnover	Net credit sales/ Average net accounts receivable
2	Inventory turnover	Cost of goods sold/ Average inventory
Solvency ratios		
1	Debt to total asset ratio	Total debt/ Total assets
2	Times interest earned	Income before income taxes and interest expense/ Interest expense

4.2.1 Profitability ratios

(1) Vertical comparison of profitability

Gross margin measures the relationship between sales revenue and cost of goods sold. A high ratio can indicate higher profits. But the low ratio is often explained as a decrease in sales resulting in lower income. Gross margin is not an accurate explanation of a company's pricing strategy. Net profit margin is calculated as a supplement to gross profit margin. It can be interpreted as net income as a percentage of revenue. It says it measures how much money each unit of sales brings to the business. Both of these indicators represent that the higher the enterprise is, the better the business condition is judged or expected to be (Adam H, 2021).

Figure 10 Gross and net profit margin of JD from 2014-2019

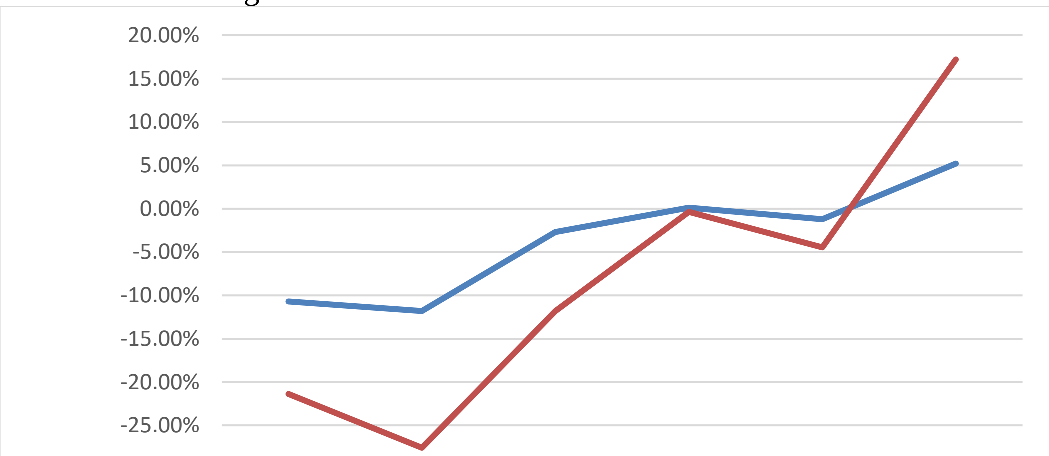


Source: Annual report of JD

According to financial data of JD over the years, the gross margin of JD is not high, but it rose from 11.63% to 15.16% from 2014 to 2016.The longitudinal data of gross margin of JD over the years shows that it is relatively stable. Looking at Net Profit Margin of JD, it has achieved a turnaround in 2018.This benefit from the establishment of JD logistics warehousing system. From -4.34 percent in 2014 to 2.06 percent in 2019. The net profit margin of JD has been on the rise. The calculation result of the financial index of net profit margin can be noticed that the profit situation of JD is improving. But net profit is negative for a long time, be in deficit condition all the time namely. This reflects the low-cost strategy of JD has always adhered to. The infrastructure of JD has invested in is slowly starting to take effect. After the continuous improvement of the supply chain forms the scale effect, the average cost of each order of JD will be greatly reduced. It will also improve the ability to control costs.

Two other measures of profitability worth noting are ROA and ROE. Return on assets is used to measure how much net income is generated per unit of assets. ROA can explain the effect of the leader's utilization of the enterprise's assets, that is, it represents the management's view of the income generated by the assets (Arthur J Keown, 2004). ROE, as distinct from ROA, represents net income as a percentage of total Stockholders' equity. It is used to explain the utilization rate of the capital invested by the company's shareholders. The higher the index, the higher the company's earnings from shareholders' equity (Arthur J Keown, 2004).

Figure 11 ROA and ROE of JD from 2014-2019



	2014/12/31	2015/12/31	2016/12/31	2017/12/31	2018/12/31	2019/12/31
Return on Assets	-10.70%	-11.80%	-2.70%	0.10%	-1.20%	5.20%
Return on Equity	-21.38%	-27.57%	-11.82%	-0.35%	-4.46%	17.21%

Source: Annual report of JD

It can be seen from the table that ROA of JD has been negative for a long time. It did not become positive until 2019.A negative ROE represents a period in which the company is in the red. It is possible that the negative ROE is because the company is seeking for greater development and needs a large amount of foreign capital investment, leading to the rise of the company's assets. JD needs a lot of capital due to its long-term investment in basic setting. JD has had a chronically negative ROE. After the listing of JD in 2014, it did not need financing to expand the scale of the enterprise. The income of JD has been increasing, and the ROE has also been constantly improving, which turned from negative to positive in 2018. Even so, it can still be said from the ROE index that JD faces high financial risk.

(2) Horizontal comparison of profitability

According to the data in Table 7, Alibaba and Suning have the same e-commerce business as JD. Alibaba is the most profitable performer, with both gross and net profit margin much higher than those of JD and Suning. This is closely related to Alibaba's corporate strategy and competitive advantage. The net profit margin of JD was the lowest of the three at 2.06%. The main reason for this index is the long-term logistics construction. This input accounts for a great deal of the cost. At the same time, to ensure the purchasing power of consumers, JD has not passed on the cost to consumers. JD has absorbed costs in the form of low margins.

Table 7 Horizontal comparison of profitability

	Index	Alibaba	JD	Suning
1	Gross Profit Margin	45.09%	14.63%	14.50%
2	Net Profit Margin	21.29%	2.06%	3.50%
3	Return on Assets	10.20%	5.20%	4.30%
4	Return on Equity	16.40%	17.21%	11.70%

Source: Annual report data of listed companies.

According to the calculation of ROA and ROE, Alibaba still appears to be the industry leader. Suning the old rival of JD performance slightly weaker. Although the ROE of JD turned positive in 2019, there are more expectations that it will stabilize. This is also the benefits of JD Logistics' turnaround.

4.2.2 Liquidity ratios

(1) Vertical comparison of liquidity

The current ratio is used to explain the ability of a company's current assets to become liquid and meet the purpose of repaying the liabilities before the short-term liabilities of these assets mature. Quick ratio is interpreted as the company's current assets become liquid immediately, but it is the ability to repay current liabilities (Adam H, 2021). An important calculation difference here is that in the calculation of quick assets, it includes short-term investments, accounts receivable, notes receivable, other receivables, and monetary funds that can be realized in the short term. It should be emphasized that the calculation does not include inventory, other current assets and non-current assets with a one-year term. This paper judges the liquidity ratio of each enterprise according to these rules.

Table 8 Current ratio and Quick ratio of JD from 2014 to 2019

Index	2014	2015	2016	2017	2018	2019
Current ratio	1.72	1.19	1.02	0.97	0.87	0.99
Quick ratio	1.30	0.77	0.74	0.62	0.50	0.58

Source: Annual report of JD

According to calculation results, the quick ratio and current ratio are low, reflecting the general level of debt repayment. The current liabilities of JD have been increasing. The liquidity ratio and quick ratio are also affected. However, for enterprises in the period of rapid growth, there is a large amount of idle monetary funds, which may involve problems such as the efficiency of funds. JD should pay attention to the gradual decline of liquidity ratio. JD should increase its current assets or reduce its current liabilities to reduce the financial risks caused by debt problems.

(2) Horizontal comparison of liquidity

According to the horizontal comparison data in Table 9, Alibaba's current ratio and quick ratio are 1.3 and 1.26 in 2019. JD has a current of 0.99 and a quick ratio of 0.58. The performance of Suning is like JD. It is not hard to see here that Alibaba has better short-term solvency compared with JD and Suning. Alibaba mainly provides a platform for merchants to enter. In addition, the self-built storage center of JD and the offline stores of Suning need to have amounts of inventory. Therefore, in the short-term solvency performance appears weaker.

Table 9 Horizontal comparison of liquidity

	Index	Alibaba	JD	Suning
1	Current ratio	1.3	0.99	0.99
2	Quick ratio	1.26	0.58	0.47

Source: Annual report data of listed companies.

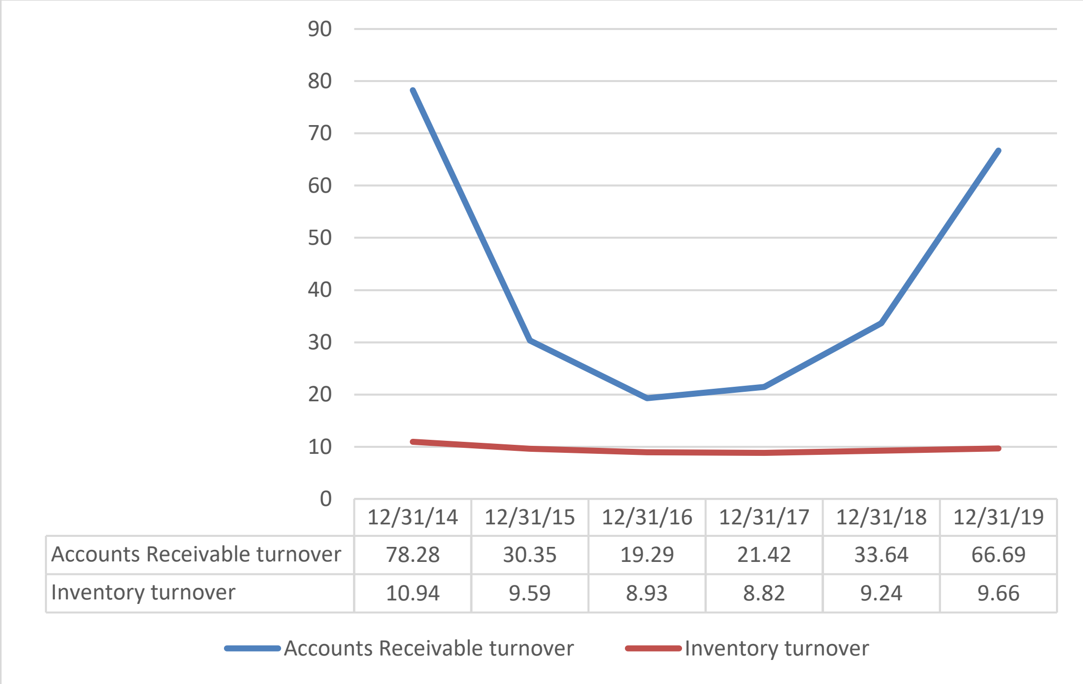
4.2.3 Operational capability

(1) Vertical comparison of operational capability

Accounts receivable turnover is the extent to which accounts receivable flow in an enterprise can be explained. The higher the accounts receivable turnover rate, the shorter the average period for receiving the accounts. This also means that accounts receivable can be collected more quickly. If the index is too small, it means that the recovery speed of enterprise accounts receivable is slow, which has a negative impact on the capital operation of the enterprise. (Chris B, 2021).

Inventory turnover is even more important for companies that own warehouses. This indicator is interpreted as a change in the speed of inventory turnover. In the business links of a company, inventory turnover can be used to evaluate the operating efficiency of inventory and to reflect the performance level of an enterprise. The higher the inventory turnover, the faster the company's inventory can become liquid. Inventory turnover can also affect the short-term solvency of enterprises. The lower the index means the slower the inventory can be converted into capital or accounts receivable. (Jason F, 2021).

Figure 12 Accounts Receivable turnover and inventory turnover of JD from 2014-2019



	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19
Accounts Receivable turnover	78.28	30.35	19.29	21.42	33.64	66.69
Inventory turnover	10.94	9.59	8.93	8.82	9.24	9.66

Source: Annual report of JD

The accounts receivable turnover rate of JD showed a rapid downward trend from 2014 to 2016. From 2017 to 2019, this ratio rises again. It depends on the credit business of JD. The finance business of JD started its credit and credit business in 2014. Credit and credit business although to a certain extent increased sales performance. But it also increases the amount of accounts receivable. The development of JD Finance makes up for the deficiency in the field of mobile payment. Alibaba and Tencent have long held the leading position in China's electronic payments sector. JD has chosen to develop credit sales and small loans. This is a successful example of JD to combine its own competitive advantages.

The inventory turnover of JD is between 8 and 11 in 2014-2019. The overall range of change of this index also tends to be stable. This benefits from the construction of the self-storage logistics system of JD. The inventory turnover rate of JD can be said to be a small range of fluctuations. This indicates that the inventory operation level is relatively stable. JD has a relatively mature inventory management system.

(2) Horizontal comparison of operational capability

According to the horizontal comparison data shown in Table 10, firstly, this paper does not give Alibaba's accounts receivable turnover and inventory turnover. This is mainly because Alibaba is a Consumer to Consumer model, so it is unreasonable to give these two indicators. JD and Suning are both B2B companies. In 2019, the accounts receivable turnover and inventory turnover ratio were 66.69% and 9.66% respectively, while Suning's ratio corresponding to 29.1% and 9.4%. As a result, the operating capacity of JD is better than Suning's.

Table 10 Horizontal comparison of operational capability

	Index	Alibaba	JD	Suning
1	Accounts Receivable turnover	-	66.69%	29.1%
2	Inventory turnover	-	9.66%	9.4%

Source: Annual report data of listed companies.

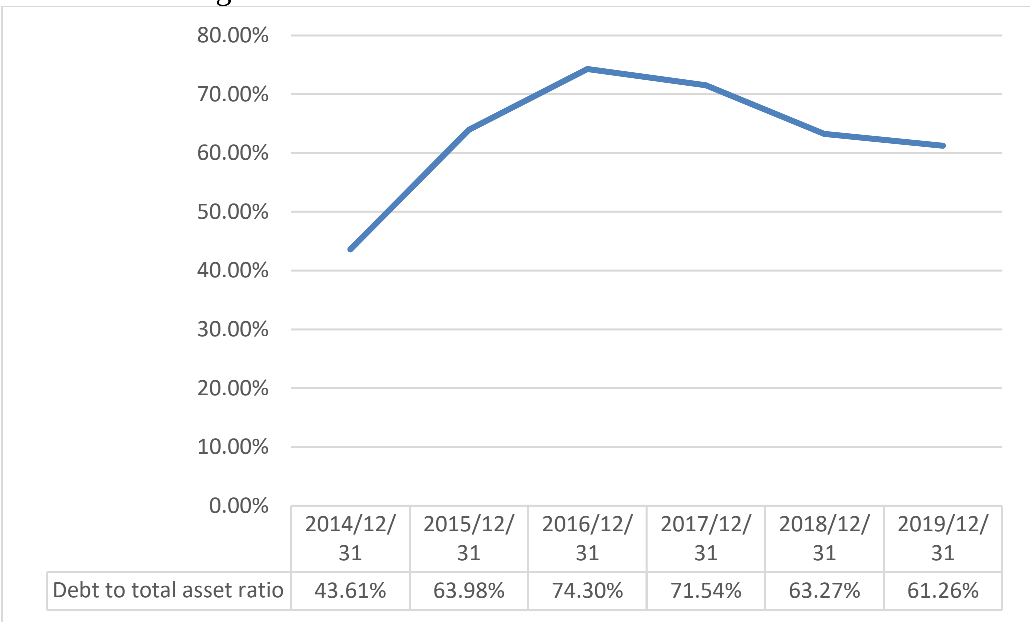
It is worth noting that because JD avoids the efficiency problems caused by the connection with third-party logistics, it has formed a competitive point for effective competition with Alibaba's e-commerce business. In addition, high inventory turnover reduces inventory overhang, freeing up more capital and reducing cash flow pressure. In terms of business strategy, JD successfully refines the market with the delivery speed under the independent logistics system through the asset-heavy e-commerce platform, which is also recognized by its competitors. This has also enabled JD to successfully build a competitive position that can compete with Alibaba's logistics layout.

4.2.4 Solvency ratios

(1) Vertical comparison of solvency ratio

Debt ratio means the proportion of the company's assets through debt (Adam H, 2021). As it literally means, total liabilities divided by total assets. This represents how much of a company is financed by debt. If the debt ratio is too high, it means that the majority of the company's assets are made up of debt. On the contrary, it means that the equity financing of the enterprise may be the main way of financing. Debt ratio affects the level of corporate leverage ratio. Higher-interest debt is often more financially demanding. That means companies face greater financial risk. Data from JD from 2014 to 2019 show that the asset-liability ratio rose to 74.3% in 2016, and then gradually decreased to 61.26% in 2019. This shows that JD is trying to actively adjust its asset structure and reduce the ratio of liabilities. JD has achieved its goal of improving its long-term solvency.

Figure 13 Debt to total asset ratio of JD from 2014-2019



Source: Annual report of JD

The multiple of interest income is used to explain another indicator of a company's ability to service its debt. It is earnings before interest and tax (EBIT) as a percentage of total interest expense. This indicator can explain the profitability of the enterprise. If the interest income multiple is low, it means that the current pre-tax profit of the enterprise cannot support the interest debt of the enterprise. Enterprises may be forced to use cash to make up the difference, and even new lending behaviors may be generated (James Chen, 2020). However, the long-term losses of JD did not provide a good multiple of interest protection. Before 2019, JD's times interest earned is close to zero. By calculation, the effective times interest earned is in 2019. This index of JD stood at 10.11.

(2) Horizontal comparison of solvency ratio

From the horizontal data in Table 11, it is not difficult to see that Alibaba's debt to total asset ratio is 36.23%, while Suning's asset-liability ratio is close to JD. This suggests that Alibaba has better long-term solvency than JD and Suning. In the times interest earned ratio, JD is between Alibaba and Suning. This shows that the long-term solvency is weaker than Alibaba's, but stronger than Suning's.

Table 11 Horizontal comparison of solvency ratio

	Index	Alibaba	JD	Suning
1	Debt to total asset ratio	36.23%	61.26%	63.21%
2	Times interest earned	11.13	10.11	7.52

Source: Annual report data of listed companies.

4.2.5 Summary

In this chapter, the paper analyzes the financial performance of JD using financial index analysis and comparative analysis. From the perspective of profitability indicators, JD's profitability performance is not outstanding. This is not the main goal of JD profit - based. In the analysis of liquidity ratio, JD should improve its quick ratio and current ratio. In the analysis of operation capacity, the accounts receivable turnover of JD varies greatly, but the turnover rate of inventory remains stable. According to the analysis results of long-term solvency, the debt ratio of JD is within a reasonable range and is gradually improving. In the horizontal comparative analysis, Alibaba has always been the best performance. But JD has fared better on financial metrics than its old rival, Suning. It is also seen as an endorsement of JD's strategy.

Alibaba's dual-class share structure is different from JD's, so this paper will not discuss it further. For shareholders under the general equity structure, the low profitability and high debt of JD may have become a red warning for the company's financial condition. The guarantee of shareholders' assets will also face more uncertainties. However, due to the dual ownership structure, the founding team represented by Richard Qiangdong Liu and his team control the actual control. JD can continue to maintain high financial leverage and continue to develop the strategic layout of the company.

The dual-class share structure strengthens Mr. Liu and his team's ability to manage the company. Ensure the stability of cash flow in the operation of the company. Expand business scale and scope according to strategic layout. In addition, when entering the highly competitive commercial market, JD integrates its own commercial characteristics to carry out market segmentation and differentiated positioning. JD is constantly exploring its potential customer base. This is why JD's active users keep going public, giving it a certain market share and brand trust.

The dual-class share structure avoids the impact of other stakeholders on the long-term development of JD. For example, JD insists on accumulating supply chain resources. JD insists on investing and developing its own warehousing, logistics and after-sales service system. Adherence to these strategies may not be satisfactory to outside shareholders, at least from the perspective of financial performance, for the company's current operating results. Shareholders could put pressure on operating team of JD. But the special voting structure gave the founding team the ability to stick to its strategic layout. Therefore, the financial data will also show the influence of long-term adherence to the strategic layout.

In addition, the dual-class share structure of JD has amplified the level of governance of Richard Qiangdong Liu and his team. The inflow of external capital also affirms the governance level of excellent actual controllers. Therefore, it also ensures that the strategic layout of JD can have enough capital support in the future.

4.3 Problems and suggestions of JD

4.3.1 Problems under the dual class structure of JD

(1) JD has a statement of shareholders' equity item in its annual financial report. The statement indicates that JD has a low degree of protection for investors due to restrictions on its shareholding structure and corporate governance in the place where it is registered. As the dual-class structure concentrates most of the control in founder Richard Qiangdong Liu, the rights and interests of minority shareholders are more vulnerable to infringement than those of enterprises with the same share and the same right structure. According to the agency theory, the agent problem between management and shareholders is not the main factor affecting the agent cost under the dual ownership structure. Because under the dual-class structure, the majority shareholder is the founder and his team. Therefore, there is no need to worry too much about management shortsightedness, moral hazard, adverse selection and other problems that may occur in corporate governance. Under the dual ownership structure, the most prominent agency issue is the conflict of interest minority shareholders who hold fewer shares in the company. Their own participation in the management of the company is very low enthusiasm. They're more likely to vote with their feet. Compared with minority shareholders, large shareholders have advantages in information and decision-making rights, which may harm the interests of minority shareholders.

(2) According to stakeholder theory in chapter three, the dual class share structure of JD may affect other stakeholders. Compared with the agency problem under the same share and same right structure, the agency cost under the dual share structure is easier to be increased. In terms of stakeholders aside from creditors, the most vulnerable are enterprise employees. Chinese Company Law stipulates that the board of directors can have an accurate count of employee representatives, but it is not required. This also means that the employee's decision-making power depends on whether or not the company's articles of association provide for it. Due to the existence of agency problem, the interests of shareholders and management may be harmed by excessive investment and insufficient investment. The lack of supervision in the application of dual ownership structure is likely to increase the degree of information asymmetry.

(3) According to the requirements of NASDAQ and Cayman Islands. JD does not have a board of supervisors and does not need to hold annual shareholder meetings. This restricts the supervision mechanism of JD to a large extent on the risk points of dual ownership structure. The imperfect system of board of supervisors, independent directors and the conflict between dual ownership structure have become the problems that must be solved in the application of dual structure. Therefore, the normal decision-making or operation of the board of supervisors and the board of directors is closely related to the major shareholders. The company shall apply dual ownership structure. Most board and supervisory boards are nominated by the founder and his team. This makes it difficult for the board of directors and the Board of Supervisors to normalize their statutory supervisory role. The functions and powers of the board of directors and the Board of Supervisors involve the company's business plan, investment plan, the nomination of the manager and the person in charge of finance. This means that once the supervision mechanism fails, it will have a comprehensive influence on the firm's investment, financing, and business activities.

4.3.2 Suggestions under the dual-class structure of JD

(1) The dual-class structure of JD keeps control of the firm in the hands of Richard Qiangdong Liu and his team. This avoids the risk that founders lose control after bringing in outside capital. But Richard Qiangdong Liu and his team have too much power over the company's big issues. That has led to too much concentration of power in Richard Qiangdong Liu's hands. The possibility that such a situation might infringe on the interests of other shareholders. Moreover, the company's internal directors are all dominated by the founder, and the internal supervision mechanism weakens or even fails. Therefore, it is necessary to limit the application scope of multiple voting rights of Class B in the articles of association. Take the example of Facebook. Its dual-class structure was designed to limit the multiple voting rights of Zuckerberg to mergers and acquisitions, the sale of most of his assets and the election of directors (Hu, V. et al, 2012). The original intention of dual ownership structure can be realized by restricting the application scope of multiple voting rights. The measure raises capital while retaining the founder's control over the company. It can also minimize the extent to which dual-class structure weakens the internal supervision mechanism of the company.

(2) On the one hand, the dual-class structure makes the founder hold the absolute advantage of control; on the other hand, it makes the minority shareholders basically lose the right to speak. Minority shareholders cannot influence the company's business decisions.

Therefore, for the long-term development of the company, the company should also establish and improve the supervision mechanism and try to minimize the negative effects that might be brought about by excessive concentration of power. The most effective way is to perfect the independent director system, to ensure that independent directors can play their due role in dual-share structure companies. In dual-class companies, directors are made up of the founder or management. The board's decisions are strongly influenced by holders of Class B shares. As mentioned earlier, if founder Richard Qiangdong Liu does not attend the board meeting, the board meeting will not be held normally. This rule is too harsh and is a risk in the day-to-day running of the board. The rules have also increased the sensitivity of the market to JD and its founder, Richard Qiangdong Liu. For example: Richard Qiangdong Liu incident a prosecute in Minnesota in August 2018[30]. Richard Qiangdong Liu was charged and released the next day. But the market value of JD fell sharply as a result. To avoid such risks, JD should strengthen the governance of its board of directors. The original intention of the establishment of independent directors is to strengthen the supervision of the behavior of senior executives. Status independence and meaning independence is its biggest characteristic. Its existence does not endanger the controlling shareholders' control over dual-class companies. The independent director system can play a certain supervisory role on the controlling shareholders' decision-making on the company's strategy and operation. The independent director system can also reduce the possibility of controlling shareholders abusing their power for personal gain and encroaching on the interests of minority shareholders.

(3) Because of the weak position of external investors, the dual share structure may violate the rights of external investors. Public investors have limited knowledge of the use of dual-class shares. The accuracy of decisions is directly related to the quality and quantity of information available to investors. Enterprises should fulfill the obligation of information disclosure. In this way, the contradiction caused by information asymmetry can be well solved. Therefore, enterprises need to timely disclose founder information to maximize the specific situation of the enterprise to investors. Enterprises should timely disclose the information of senior executives. Timely announcement of senior management changes. To some extent, the stability of a company is affected by the stability of its management. Timely disclosure of senior management information will help investors make decisions. JD should take the initiative to enhance its own awareness of information disclosure. In addition to the

[30] From: https://en.wikipedia.org/wiki/Liu_Qiangdong

mandatory disclosure documents stipulated by the regulator, such as the prospectus, listing notice, periodic report, and interim report. JD should publish the specific amount of Class A and Class B shares held by Richard Qiangdong Liu and his team, the change status, the deviation degree of control right and cash flow right timely. At the same time, JD should also make a detailed disclosure of the potential risks inherent in the special shareholding structure.

5.Conclusion

This paper analyzes the reasons, influences, problems, and Suggestions of the dual ownership structure of JD. There are two main reasons for JD to choose dual-class structure. First, under the influence of enterprise growth cycle and financing demand, JD guarantees the control right. Second, it conforms to the strategic choice in the market competition. Compared with the ownership structure with one share one right, dual ownership structure is more like an inclusive governance structure. In this paper, the case is embodied in two aspects. The first is corporate governance. The dual ownership structure promotes the efficient operation of strategic decision-making mechanism and ensures the consistency of the company's operation by stabilizing the firm's control over a long time. Second, business results. The dual ownership structure not only ensures the continuous expansion of the operation scale and asset volume but also improves the operation condition. JD enterprise culture can guarantee and continue. But the dual-class share structure has also created problems for JD. These problems include the loss of other stakeholders due to the excessive concentration of control, management problems and the failure of the supervision mechanism. This paper proposes that JD should limit the use scope of multiple voting rights, improve the board system, and strengthen information disclosure. As for the significance of the existence of dual-class structure, the author also obtains the following considerations.

The control right of the company under the dual ownership structure is controlled by the actual operator. The overall development strategy and management policy of an enterprise are mainly influenced by actual operators. Good leadership teams certainly produce good corporate governance results. However, it is impossible to guarantee the quality and ability of the actual operators of all dual-class companies. Therefore, when the company's leadership team is insufficient, it may not be able to play the important responsibility of leading the progress of the company. When the level of moral quality is poor, it may erode the benefits of other shareholders, or even damage the gains of the company for personal gain. Currently, dual share structure not only fails to exert positive influence on corporate governance, but also becomes a tool for managers to abuse their private rights and infringe on the interests of other shareholders. Therefore, dual-class share structure companies should pay special attention to the comprehensive quality and ability of the actual operators. When the company operator appears leadership or moral quality problems, we should also pay attention to, keep alert and timely stop losses.

Under the dual-class structure, the firm's internal managers will directly be a part of the company's shareholders and hold class B with excess voting rights. The remaining shareholders are made up of outside investors holding Class A common voting shares. Because Class B shares cannot be transferred directly in the capital market, their circulation is limited to a certain extent, and the excess rights after circulation are often no longer retained. The long-term investment and expectations of a company's founder. These ensure that the control held by the actual controller can maintain long-term stability. This ensures long-term stability of the overall control of the company. It also avoids the recurring swings in corporate control. For example, it provides a stable guarantee for the implementation of strategies that are in the stage of development and less profitable, but of great significance for future development. The actual operator has absolute control over a long time to ensure that the relevant projects get enough resource input. This prevents other stakeholders from influencing the long-term implementation of the strategy out of their pursuit of personal interests.

Reference

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. Journal of economic literature, 48(1), 58-107.

Adam Hayes (2021, February 19). Profitability Ratios. Retrieved March 29, 2021, from https://www.investopedia.com/terms/p/profitabilityratios.asp

Adam Hayes (2021, February 24). Liquidity Ratio Definition. Retrieved March 29, 2021, from https://www.investopedia.com/terms/l/liquidityratios.asp

Adam Hayes (2021, March 11). Solvency Ratio. Retrieved March 29, 2021, from https://www.investopedia.com/terms/s/solvencyratio.asp

Amihud, Y., Lev, B., & Travlos, N. G. (1990). Corporate control and the choice of investment financing: The case of corporate acquisitions. The Journal of Finance, 45(2), 603-616.

Amoako-Adu, B., Baulkaran, V., & Smith, B. F. (2014). Analysis of dividend policy of dual and single class US corporations. Journal of Economics and Business, 72, 1-29.

Amoako-Adu, B., & Smith, B. F. (2001). Dual class firms: Capitalization, ownership structure and recapitalization back into single class. Journal of Banking & Finance, 25(6), 1083-1111.

Arugaslan, O., Cook, D. O., & Kieschnick, R. (2010). On the decision to go public with dual class stock. Journal of Corporate Finance, 16(2), 170-181.

Auronen, L. (2003, May). Asymmetric information: Theory and applications. In Seminar of strategy and international business at Helsinki University of Technology.

Bebchuk, L. A., Kraakman, R., & Triantis, G. (2000). Stock pyramids, cross-ownership, and dual class equity: the mechanisms and agency costs of separating control from cash-flow rights. In Concentrated corporate ownership (pp. 295-318). University of Chicago Press.

Bi, X., & Zhang, D. (2017, June). Research on the Core Advantages of Jing dong Mall. In 2017 2nd International Conference on Education, Sports, Arts and Management Engineering (ICESAME 2017). Atlantis Press.

Böhmer, E., Sanger, G. C., & Varshney, S. B. (1995). The Effect of Capital Structure and Consolidated Control on Firm Performance: The Case of Dual-class IPOs.

Chen, C. M., Zhang, K. S., & Li, H. (2020, October). Research on the Relationship Among Electronic Word-of-Mouth, Trust and Purchase Intention-Take JingDong Shopping

E-commerce Platform as an Example. In International Conference on Computer Engineering and Networks (pp. 100-104). Springer, Singapore.

Chemmanur, T. J., & Jiao, Y. (2012). Dual class IPOs: A theoretical analysis. Journal of Banking & Finance, 36(1), 305-319.

Chopra, S., & Meindl, P. (2015). Supply Chain Management Strategy and Operation. Pearson. DOI, 10, 978-3.

Cremers, M., Lauterbach, B., & Pajuste, A. (2018). The life-cycle of dual class firm valuation. European Corporate Governance Institute (ECGI)-Finance Working Paper, (550).

Chris B Murphy (2021, March 19). Receivables Turnover Ratio. Retrieved March 29, 2021, from https://www.investopedia.com/terms/r/receivableturnoverratio.asp

Damodaran, A. (2010). Applied corporate finance. John Wiley & Sons.

DeAngelo, H., & DeAngelo, L. (1985). Managerial ownership of voting rights: A study of public corporations with dual classes of common stock. Journal of Financial economics, 14(1), 33-69.

Dimitrov, V., & Jain, P. C. (2006). Recapitalization of one class of common stock into dual-class: Growth and long-run stock returns. Journal of Corporate Finance, 12(2), 342-366.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. The journal of law and Economics, 26(2), 301-325.

Fischel, D. R. (1987). Organized exchanges and the regulation of dual class common stock. U. Chi. L. Rev., 54, 119.

Gilson, R. J. (1987). Evaluating dual class common stock: The relevance of substitutes. Virginia law review, 807-844.

Gompers, P. A., Ishii, J., & Metrick, A. (2010). Extreme governance: An analysis of dual-class firms in the United States. The Review of Financial Studies, 23(3), 1051-1088.

Greiner, L. E. (1989). Evolution and revolution as organizations grow. In Readings in strategic management (pp. 373-387). Palgrave, London.

Gurrea-Martínez, A. (2019). Theory, evidence, and policy on dual-class shares: a country-specific response to a global debate. Evidence, and Policy on Dual-Class Shares: A Country-Specific Response to a Global Debate (June 2, 2019). Ibero-American Institute for Law and Finance Working Paper Series, 3.

Holderness, C. G. (2003). A survey of blockholders and corporate control. Economic policy review, 9(1).

Howell, J. W. (2008). No more share classes: A study of US dual class stock unifications. In

University of Georgia Working paper.

Howell, J. W. (2017). The survival of the US dual class share structure. Journal of Corporate Finance, 44, 440-450.

Howell, J. W. (2009). Essays on the US dual-class share structure. Athens: University of Georgia.

Hu, V., Mehta, H., Mittal, S., & Wheeler, J. (2012). Dual-Class Share Structures in Silicon Valley: Facebook, Inc. Inc.(December 13, 2012).

Jain, B. A., & Tabak, F. (2008). Factors influencing the choice between founder versus non-founder CEOs for IPO firms. Journal of Business Venturing, 23(1), 21-45.

James Chen (2020, September 7). Times Interest Earned (TIE) Ratio. Retrieved March 29, 2021, from https://www.investopedia.com/terms/t/tie.asp

Jarrell, G. A., & Poulsen, A. B. (1988). Dual-class recapitalizations as antitakeover mechanisms: The recent evidence. Journal of Financial Economics, 20, 129-152.

Jason Fernando (2021, February 20). Inventory Turnover. Retrieved March 29, 2021, from https://www.investopedia.com/terms/i/inventoryturnover.asp

Ji-yue, L. I. (2011). Analysis of the logistics and distribution problems of BtoC E-commerce–take JingDong mall for example. Logistics Sci-Tech, 10(32).

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. Academy of management review, 20(2), 404-437.

Jordan, B. D., Kim, S., & Liu, M. H. (2016). Growth opportunities, short-term market pressure, and dual-class share structure. Journal of Corporate Finance, 41, 304-328.

Keown, A. J. (2004). Foundations of finance: The logic and practice of financial management. 清华大学出版社有限公司.

Lehn, K., Netter, J., & Poulsen, A. (1990). Consolidating corporate control: Dual-class recapitalizations versus leveraged buyouts. Journal of Financial Economics, 27(2), 557-580.

Li, T., & Zaiats, N. (2017). Information environment and earnings management of dual class firms around the world. Journal of Banking & Finance, 74, 1-23.

Maury, B., & Pajuste, A. (2011). Private benefits of control and dual‐class share unifications. Managerial and Decision Economics, 32(6), 355-369.

Masulis, R. W., Wang, C., & Xie, F. (2009). Agency problems at dual‐class companies. The Journal of Finance, 64(4), 1697-1727.

Miller, M., & Modigliani, F. (1958). The cost of Capital. Corporate Finance and the Theory of

Investment. American Economic Review, 48(3), 261-297.

Nelson, T. (2003). The persistence of founder influence: Management, ownership, and performance effects at initial public offering. Strategic management journal, 24(8), 707-724.

Nguyen, V. T., & Xu, L. (2010). The impact of dual class structure on earnings management activities. Journal of Business Finance & Accounting, 37(3‐4), 456-485.

Rydqvist, K. (1992). Dual-class shares: a review. Oxford Review of Economic Policy, 8(3), 45-57.

Seligman, J. (1985). Equal protection in shareholder voting rights: The one common share, one vote controversy. Geo. Wash. L. Rev., 54, 687.

Shao, K., & Cheng, F. (2016). Analysis of Jingdong Mall Logistics Distribution Model. In Proceedings of the 2015 International Conference on Applied Mechanics, Mechatronics and Intelligent Systems (AMMIS2015) (pp. 931-936).

Shleifer, A., & Vishny, R. W. (1997). lA Survey of Corporate Governance, mJournal of Finance. Vol: II, (2).

Slack, N., & Brandon-Jones, A. (2018). Operations and process management: principles and practice for strategic impact. Pearson UK.

Smith, B. F., & Amoako-Adu, B. (1999). Management succession and financial performance of family controlled firms. Journal of Corporate Finance, 5(4), 341-368.

Taylor, S., & Whittred, G. (1998). Security design and the allocation of voting rights: Evidence from the Australian IPO market. Journal of Corporate Finance, 4(2), 107-131.

Wan, X., Lu, Z., Hu, Q., & Yu, M. (2017, June). Application of asset securitization and block chain of internet financial firms: take Jingdong as an example. In 2017 International Conference on Service Systems and Service Management (pp. 1-6). IEEE.

Weian, L., Chen, H., Guangyao, C., Minna, Z., & Qiankun, M. (2019). Forty Years of Corporate Governance Research: A Review and Agenda. Foreign Economics & Management, 41(12), 161-185.

Weygandt, J. J., Kimmel, P. D., Kieso, D. E., Weygandt, K., & Weygandt, K. (2012). Financial accounting, IFRS edition.

Wu, A. (2019, June). Logistics Cost Control of Jingdong Mall Under E-Commerce Mode. In International Conference on Applications and Techniques in Cyber Security and Intelligence (pp. 592-599). Springer, Cham.

Yu, G., & Boyu, W. (2017). An Analysis of Dual Class Equity System-Taking Vanke as an Example. Economics, 6(4), 44.

Yu, Y., Wang, X., Zhong, R. Y., & Huang, G. Q. (2016). E-commerce logistics in supply chain management: Practice perspective. Procedia Cirp, 52, 179-185.

Zhang, C. X., & King, T. H. D. (2010). The decision to list abroad: The case of ADRs and foreign IPOs by Chinese companies. Journal of Multinational Financial Management, 20(1), 71-92.

Appendix A -Balance sheet of JD, Inc.

As of December 31,						
	2014	2015	2016	2017	2018	2019
	RMB	RMB	RMB	RMB	RMB	RMB
Assets						
Current assets						
Cash and cash equivalents	16,914,651	17,863,868	19,771,695	25,688,327	34,262,445	36,971,420
Restricted cash	3,038,286	2,114,913	4,391,955	4,110,210	3,239,613	2,940,859
Short-term investments	12,161,643	2,780,482	7,173,626	8,587,852	2,035,575	24,602,777
Investment securities			723,449			
Accounts receivable, net	2,436,256	9,508,284	17,464,408	16,359,147	11,109,988	6,190,588
Advance to suppliers	930,026	927,177	1,423,736	394,574	477,109	593,130
Accounts receivable, net	12,190,843	20,539,543	28,909,438	41,700,379	44,030,084	57,932,156
Loan receivables, net	123,344	2,383,869	12,697,915	5,132,698	2,716,475	1,551,459
Prepayments and other current assets			10,766,920			
Prepayments and other current assets	1,734,334	1,486,441	2,198,906	2,258,904	3,848,225	4,078,102
Amount due from related parties	412,314	863,516	1,410,050	10,796,561	3,136,265	4,234,067
Total current assets	49,941,697	58,468,093	106,932,098	115,028,652	104,855,779	139,094,558
Non-current assets						
Property, equipment and software, net	2,408,438	6,233,106	7,397,029	12,574,178	21,082,838	20,654,071
Construction in progress	1,928,899	1,266,992	1,992,123	3,196,516	6,553,712	5,806,308
Intangible assets, net	6,877,947	5,263,983	8,454,297	6,692,717	5,011,706	4,110,034
Land use rights, net	1,067,253	1,928,192	2,447,511	7,050,809	10,475,658	10,891,742
Operating lease right-of-use assets						8,643,597

Goodwill	2,622,470	29,050	6,541,668	6,650,570	6,643,669	6,643,669
Investment in equity investees	586,959	8,864,249	15,235,020	18,551,319	31,356,616	35,575,807
Investment securities	434,118	1,005,831	1,060,632	10,027,813	15,901,573	21,417,104
Other investments			6,997,425			
Deferred tax assets				158,250	103,158	80,556
Other non-current assets	625,391	2,106,673	3,315,715	2,227,942	5,283,948	6,806,258
Amount due from related parties				1,896,200	1,896,200	
Total non-current assets	16,551,475	26,698,076	53,441,420	69,026,314	104,309,078	120,629,146
Total assets	66,493,172	85,166,169	160,373,518	184,054,966	209,164,857	259,723,704
LIABILITIES						
Current liabilities						
Short-term borrowings	1,890,771	3,040,209				
Short-term borrowings			8,333,317	200,000	147,264	
Nonrecourse securitization debt		579,843	9,389,213	12,684,881	4,397,670	
Accounts payable	16,363,671	29,819,341	43,988,087	74,337,708	79,985,018	90,428,382
Advance from customers	4,666,660	7,173,885	11,632,766	13,605,298	13,017,603	16,078,619
Deferred revenues	157,080	1,028,350	1,221,865	1,592,332	1,980,489	3,326,594
Taxes payable	236,160	103,211	575,848	658,220	825,677	2,015,788
Amount due to related parties	325,119	104,726	167,655	54,342	215,614	317,978
Accrued expenses and other current liabilities	5,311,832	7,178,065	29,431,484	15,117,840	20,292,680	24,656,180
Deferred tax liabilities	43,812	1,228				
Operating lease liabilities						3,193,480
Total current liabilities	28,995,105	49,028,858	104,740,235	118,250,621	120,862,015	140,017,021

Non-current liabilities						
Deferred revenues		2,705,164	2,156,835	1,273,545	463,153	1,942,635
Nonrecourse securitization debt		2,753,699	4,077,627	4,475,238		
Unsecured senior notes			6,831,012	6,447,357	6,786,143	6,912,492
Deferred tax liabilities			907,356	882,248	828,473	1,338,988
Long-term borrowings					3,088,440	3,139,290
Other non-current liabilities			440,670	337,254	308,489	225,883
Operating lease liabilities						5,523,164
Total non-current liabilities		5,458,863	14,413,500	13,415,642	11,474,698	19,082,452
Total liabilities	28,995,105	54,487,721	119,153,735	131,666,263	132,336,713	159,099,473

Appendix B - Consolidated Statements of Operations and Comprehensive Income/(Loss) of JD, Inc.

	As of December 31,					
	2014	2015	2016	2017	2018	2019
	RMB	RMB	RMB	RMB	RMB	RMB
Net revenues						
Online direct sales	108,549,258	167,720,984	237,701,986	331,824,410	416,108,746	510,733,967
Services and others	6,453,059	13,565,971	22,419,659	30,507,344	45,911,013	66,154,517
Total net revenues	115,002,317	181,286,955	260,121,645	362,331,754	462,019,759	576,888,484
Cost of revenues	(101,631,443)	(157,008,329)	(220,698,727)	(311,516,831)	(396,066,126)	(492,467,391)
Fulfillment	(8,067,048)	(13,920,988)	(20,950,501)	(25,865,128)	(32,009,658)	(36,968,041)
Marketing	(4,010,280)	(7,736,172)	(10,573,024)	(14,918,107)	(19,236,740)	(22,234,045)
Technology and content	(1,835,919)	(3,453,804)	(5,380,907)	(6,652,374)	(12,144,383)	(14,618,677)
General and administrative	(5,260,064)	(2,876,989)	(4,663,383)	(4,214,790)	(5,159,666)	(5,490,159)
Impairment of goodwill and intangible assets		(2,750,129)			(22,317)	
Gain on sale of development properties						3,884,709
Total operating expenses	(120,804,754)	(187,746,411)	(262,266,542)	(363,167,230)	(464,638,890)	(567,893,604)
Income/(loss) from operations	(5,802,437)	(6,459,456)	(2,144,897)	(835,476)	(2,619,131)	8,994,880
Other income/(expense						
Share of results of equity investees		(3,134,283)	(2,785,343)	(1,926,720)	(1,113,105)	(1,738,219)
Interest income	637,641	414,999	481,618	2,530,490	2,117,921	1,785,572
Interest expense	(28,825)	(82,507)	(259,657)	(963,742)	(854,538)	(725,010)

Others, net	216,587	(140,597)	1,474,055	1,316,408	95,175	5,375,309
Income/(loss) before tax	(4,977,034)	(9,401,844)	(3,234,224)	120,960	(2,373,678)	13,692,532
Income tax benefits/(expenses)	(19,324)	14,262	(179,500)	(139,593)	(426,872)	(1,802,440)
Net income/(loss) from continuing operations	(4,996,358)	(9,387,582)	(3,413,724)	(18,633)	(2,800,550)	11,890,092
Loss from discontinued operations, net of income tax				6,915		
Net loss attributable to JD, Inc.	(4,996,358)	(9,387,582)	(3,413,724)	(11,718)	(2,800,550)	11,890,092
Net loss from continuing operations attributable to non-controlling interests shareholders		(9,566)	(51,591)	(135,452)		(297,163)
Net income attributable to mezzanine classified noncontrolling interests shareholders			444,657			
Net income from discontinued operations attributable to mezzanine equity classified as non-controlling interests shareholder				(281,021)		
Net loss from continuing operations attributable to non-controlling interests shareholders					(311,409)	
Net loss from discontinued operations attributable to non-controlling interests shareholders				5,030		
Net income from continuing operations attributable to mezzanine equity classified as non-controlling interests shareholders					2,492	3,100
Preferred shares redemption value accretion	(7,957,640)					
Net income/(loss) attributable to ordinary shareholders	(12,953,998)	(9,378,016)	(3,806,790)	(152,257)	(2,491,633)	12,184,155