

**MASTER OF SCIENCE IN
FINANCE**

**MASTERS FINAL WORK
PROJECT**

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Abstract

This study contains the valuation of Jiangsu Yanghe elaborated in accordance with ISEG's Finance Master's Final Work Project. Our Equity Research follows the adaptable format of a research report recommended by the CFA Institute (Pinto, Henry, Robinson, and Stowe, 2010). This research is issued considering the public available information on Jiangsu Yanghe on December 31st, 2018. Thus, the report does not take into account any events or circumstances which have arisen after this date. The target price was derived recurring to absolute valuation methods, specifically to the Discounted Cash Flow (DCF) Approach. The assumptions considered to conduct this study were the result of a thorough analysis of both the historical data publicly disclosed by the company and data from various sources, such as S&P Capital IQ, Bloomberg L.P. and Thomson Reuters Datastream. With a price target of ¥141.8 for YE18 and an upside potential of 16.31% from current ¥121.9, the final recommendation for Jiangsu Yanghe stands for 'Buy'.

JEL classification: G10 ; G32; G34;

Keywords: Equity Research; Valuation; Chinese Liquor Industry; Sub-High end Liquor;

Resumo

Este estudo contém uma avaliação da Jiangsu Yanghe elaborada de acordo com o Projeto de Trabalho Final do Programa de Mestrado em Finanças do ISEG. O Relatório de Avaliação segue as recomendações do CFA Institute (Pinto, Henry, Robinson, e Stowe, 2010). O presente relatório é emitido considerado a informação pública sobre a Jiangsu Yanghe disponível em 31 de Dezembro de 2018. Deste modo, o relatório não tem em consideração eventos ou circunstâncias que tenham ocorrido posteriormente a esta data. O preço-alvo foi obtido com recurso a métodos de avaliação absoluta, especificamente o método dos Fluxos de Caixa Descontados (DCF). Os pressupostos considerados neste estudo resultaram de uma análise exaustiva tanto de dados históricos divulgados publicamente pela empresa, como de bases de dados, como o S&P Capital IQ, Bloomberg L.P. e a Thomson Reuters Datastream. Com um preço-alvo de ¥141.8 para FA18 e um potencial de valorização de 16.31% face ao atual ¥121.9, a recomendação final para a Jiangsu Yanghe é de 'Buy'.

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(YE2018 Price Target of ¥141.8(+16.31%); recommendation is to Buy)

Liquor leading brand

The company is a representative of Jiangsu liquor and belongs to one of the old eight famous wines. Since the high-end brand Blue Classic was introduced in 2003, the company's performance has advanced by leaps and bounds.

Key statistics

Ticker	SZSE	52-Wk High	¥149.8	Shares Outstg.	1506.99	5 Year Beta	0.74
Website	http://www.chinaJiangsuYanghe.com	52-Wk Low	¥99.18	Market cap	¥182.27m		
Industry	Beverages	Current Price 26 september 2018	¥121.9	Dividend Yield	2.11%	Institutional own. %	6.68%

Stock performance

Figure 1: Historical share price

Source: Finance Yahoo and author analysis



Highlights

With a price target of ¥141.8 and an upside potential of 16.31% from current price of ¥121.9, our recommendation for Jiangsu Yanghe stands for buy. We estimate operating EPS of ¥5.5 in FY18F and ¥6.6 in FY19F, contrasting to ¥4.4 in FY17A and ¥3.9 in FY16A. The conclusions drawn from the Market Approach are relatively aligned with the DCF Approach noted above. The conclusions from our Market Approach(multiples) supports our conclusion from our DCF Approach. By observing the results ¥134.4 of the Market Approach, we conclude that Jiangsu Yanghe is overvalued when comparing to its peers by 5.52%.

The company is a representative of Jiangsu liquor and belongs to one of the old eight famous wines. Since the blue classic was introduced and the national reform(see Figure 37) in 2003, the company's performance has advanced by leaps and bounds. The 10-year CAGR is 32% and the net profit CAGR is 42%. In the 17-year company performance report, the revenue was 19.9 billion, YOY 15.92%, net profit was 6.6 billion, and YOY was 11.73%.

The adjustment of the provincial market ended, and the growth rate of the new Jiangsu market was rapid: the company has a solid foundation in the province, with a market share of 36%, far ahead of its main competitors. With the provincial market channel being rationalized, the province's revenue increased by 11.07% in the first half of 2017, and the provincial adjustment was concluded, returning to the growth track. It is expected that the growth rate in 2018 is expected to rise again. The new Jiangsu market outside the province has grown strongly, accounting for 80% of the company's provincial income. The reproducibility of the "new Jiangsu market model" will tap into more potential for the company's nationalization process.

Table 6: Valuation sensitivity analysis

Source: Crystal ball software and author analysis

Terminal growth rate	β							
	0.59	0.64	0.69	0.74	0.79	0.84	0.89	
3.50%	215.4	201.4	189.0	178.1	168.3	159.5	151.5	
3.00%	194.7	183.2	173.0	163.8	155.5	148.0	141.2	
2.50%	177.9	168.3	159.7	151.9	144.8	138.3	132.4	
2.00%	164.0	155.9	148.5	141.8	135.6	129.9	124.7	
1.50%	152.4	145.4	139.0	133.1	127.7	122.7	118.0	
1.00%	142.5	136.4	130.8	125.6	120.7	116.3	112.1	
0.50%	133.9	128.6	123.6	118.9	114.6	110.6	106.9	

Table 1: Analyst's Risk Assessment

Source: Author

Low	Medium	High
Our risk assessment reflects the fierce competition in the company's domestic market and the dependence of domestic policy changes.		

Table 2: Revenue

Source: Statutory account and author analysis

Currency: ¥m	1Q	2Q	3Q	4Q	FY
17A	758858	394191	534784	303961	1991794
16A	684301	335059	447348	251603	1718311
15A	625968	331177	1034926	570318	2562389
14A	566974	298336	365225	236686	1467221
13A	632282	308750	364285	197045	1502362

Table 3: FY17 key metrics

Source: Statutory reports

	FY17	Δ YOY
Net Revenue	19.9bn	15.90%
Pre-tax Earning	8.85bn	14.00%
Net Income	6.62bn	13.70%
Diluted EPS	4.4	13.70%
ROE	23.85%	0.27%
BVPS	22.33	14.10%

Table 4: DCF valuation

Source: Bloomberg and author analysis

Enterprise value	214,308.6
Net debt	624.0
Value of equity	213,684.6
No. of shares	1,507.0
Equity value per share	141.8
Price at 26/09/2018	121.9
Potential	16.32%

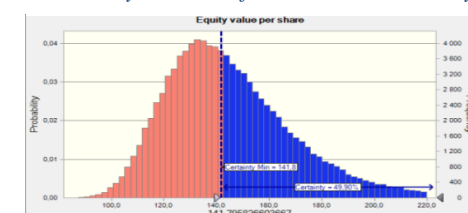
Table 5: Multiples valuation

Source: Bloomberg and author analysis

Multiple	Mean	Implied Equity value
P/E FY18	25.5	140.2
EV/EBITDA FY18	16.6	128.5
Fair price	134.4	
Current price	121.9	
Upside potential	10.23%	

Figure 2: Monte Carlo simulation

Source: Crystal ball software and author analysis



Investment Summary

With a price target of ¥141.8 for YE18F and an upside potential of 16.31% from current ¥121.9, our recommendation for Jiangsu Yanghe stands for BUY.

The company's performance report of 2017 has been announced. As a result of the one-time payment of consumption tax in the fourth quarter, the growth rate of net profit at the end of 2017 is less than the growth rate of revenue, and the subsequent impact will be weakened. We believe that this does not affect the company's long-term fundamentals. We are optimistic about the rapid expansion of high-end products represented by the Dream Series and the accelerated growth of the market inside and outside the province, especially the new Jiangsu market, which benefit from the consumption upgrade (Figure 3).

Valuation methods

The target price is derived recurring to absolute valuation methods, specifically to the Discounted Cash Flow (DCF) Approach. To support the conclusions reached with this model. We conducted a valuation through a relative valuation method, recurring to multiple comparables with equal weight. Peer group was chosen according to a set of objective criteria. The method of comparables aims to support conclusions drawn from the DCF approach.

Recent stock performance

The stock traded between a 52-week low of ¥99.18 and a high of ¥149.8, and has traded around the target price for the last 16 weeks.

Product structure upgrades, expands the market outside the province

By the end of the year, Dream Blue had grown at a high speed, with revenues exceeding 20%, surpassing Sky Blue and becoming the second largest item in the Blue Classic series. The revenue of the product Sea Blue is expected to reach 6 billion, and the Sky Blue and the Dream Blue will reach the level of 4 to 4.5 billion. Considering that the current total revenue of Dream Blue is not large, the price is high, and the growth potential is large, we expect that the rapid growth of Dream Blue will continue.

Risks to price target

First, the prosperity cycle of the liquor industry is relatively weak; Second, the adjustment of national policies; Third, the expansion of the new Jiangsu market is less than expected.

Position in the industry

Jiangsu Yanghe is the representative of Jiangsu liquor and the founder of "Mianrou" liquor. At the Third National Appraisal Conference in 1979, Jiangsu Yanghe Daqu won the title of National Famous Wine for the first time, and twice in the subsequent 4th and 5th National Appraisal, and stood out among the famous wines to achieve "three consecutive championships". Early laid out the company's brand influence across the country. The unique taste and deep brand accumulation of Jiangsu Yanghe liquor made the company's high-end series of Blue Classics launched in 2003, and a blue storm in the liquor industry. Today, the Blue Classic series continues to expand its category on the basis of the original Sea Blue, Sky Blue, and Dream Blue, achieving full coverage of mid-range, sub-high end, high-end and even ultra-high-end equivalent price segments. This product of company's revenue contributed more than 70% of the share.

Figure 3: Percentage of Revenue in Jiangsu and the rest of China

Source: Statutory account and author analysis

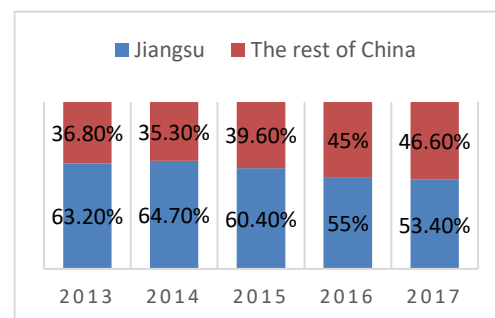


Table 7: Brand Finance 2017 Global Liquor Brand Value

Source: Xinhua finance

	Brand	Value (billion dollar)	Country
1	Moutai	11.55	China
2	Johnnie Walker	4.55	America
3	Jiangsu Yanghe	4.28	China
4	JACK DANIELS	3.06	America
5	Hennessy	2.72	France
6	Luzhou Liao Jiao	2.51	China
7	Bacardi	2.19	America
8	Smirnoff vodka	2.03	America
9	Wuliangye	1.96	China
10	Absolut vodka	1.76	Sweden

Business Description

Jiangsu Yanghe was found in 1949, it is a large-scale national enterprise. Its main production, Jiangsu Yanghe Daqu, has a history of more than 400 years. In 1979, it was ranked among the top eight national wines. The products are sold well all over the country.

The company is mainly engaged in the production and sales of liquor. The production of liquor adopts solid-state fermentation, mainly including starter-making, brewing, stocking and packaging. The sales of liquor mainly adopts two modes, namely distribution and retailing. During the reporting period, the company's primary business and business mode had not changed. According to the Guidelines for the Industry Classification of Listed Companies (2012 Revision) issued by CSRC, the Company belongs to C15 Manufacturing industry of liquor, beverages and refined tea.

The company is the national large-scale liquor production enterprise. Among the enterprises in the liquor industry, the company is the only one that has two China' time-honored brands, the two famous Chinese liquor, namely Jiangsu Yanghe and Shuanggou. and the Company has six China' well-known trademarks. The leading products of the Company are a series of mellow liquor including Dream Blue, Jiangsu Yanghe Blue Classic, Shuanggou Zhenbaofang, Jiangsu Yanghe Daqu, Shuanggou Daqu. They have high brand awareness and reputation throughout the country.

As previously mentioned, the company segments: mainly Alcoholic beverage; others like prepackaged food wholesale and retail; Grain purchase; self-operated and agent import and export business of various commodities and technologies,etc..Among them, the production and sales of liquor accounted for 97.74% of operating income.

Ownership structure

There is no preferred stock in the reporting period. According to the report, as 12 Dec 2018, Jiangsu Yanghe Group, as the largest shareholder, held 34.16% of the shares, Jiangsu Blue Alliance held 21.44%, and Shanghai Haiyan held 9.67%.(Figure 7)

Figure 7: Top ten largest common shareholders

Source:Statutory reports and author analysis

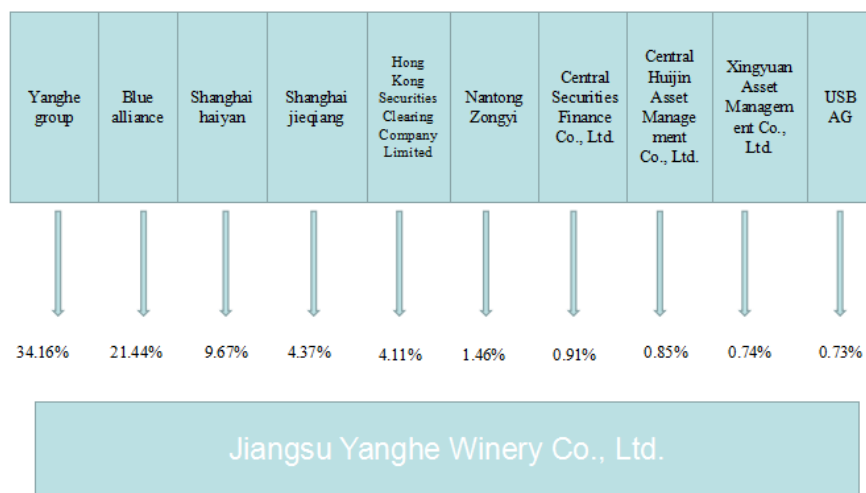


Figure 4:Jiangsu liquor distribution

Source:company website



Figure 5: Jiangsu Yanghe main products

Source:company website



Corporate governance

The company has a well-structured organization system, including the shareholders' general meeting, the board of directors, supervisory committee, the management and functional departments. Related internal management and control system is established for clear division of function and interaction with each other. It forms an organic whole that ensures the legal operation. There is no affiliation with functional departments of controlling shareholders.

The directors are elected seriously under the regulations of the Corporate Law and Articles of Incorporation. The board of the company consists of 11 directors including 4 independent directors. The structure of the board of directors satisfies the requirements of laws and regulations.

The company keeps on enhancing the corporate governance and the internal control system, which improves the management to a higher level. The Audit Committee fully

examines and supervises the financial condition, the efficiency of internal control, the efficiency and rationality of corporate governance. The audit department of the company, as an internal audit unit, carries out regular and continuous examination on perfection and implement situation of internal control system. It finds the Internal control defects and improves deficiencies timely, thus the effectiveness of internal control can be guaranteed. The operation management and anti-risk capacity are enhanced.

Company's key members

Mr. Wang Yao, Master of engineering of Jiangnan University, Master of Business Administration of Nanjing University, He is Chairman and Secretary of the the Party Committee of the Company, Chairman of Jiangsu liquor Trading Co., Ltd., Director of Blue Alliance currently.

Mr. Zhong Yu, Master Degree, Senior Engineer, Master of Chinese liquor. He is Deputy Chairman, President, Vice Secretary of the the Party Committee of Jiangsu Yanghe, General Manager of Jiangsu Yanghe Branch and Chairman of Jiangsu Shuanggou Brewery Co., Ltd.

Mr. Cong Xuenian, Master Degree, Senior Economist. At present, he is Secretary of the Board, Financial Administrator, Director, and Vice President of the Company, Chairman of Jiangsu liquor Fortune management Co., Ltd. and Director of Blue Alliance.

Mr. Han Feng, Master Degree. Chairman, General Manager of Jiangsu Yanghe Group CO., Ltd. and Jiangsu Shuanggou Group CO., Ltd. At present, he is Secretary of the Board, Financial Administrator, Director, and Vice President of the Company, Chairman of Jiangsu liquor Fortune management Co., Ltd. and Diector of Blue Alliance. Master Degree, Senior Engineer, At present, he is Director, Vice President and Chief Engineer of Company.

Wang kai,Zhou Xihu,Liu Huashuang,Xu Zhijian,Cai Yunqing, Ji Xueqing,Chen Guangtong serve as directors of Jiangsu Yanghe

Mr. Feng Pantai, College degree, Senior Economist. He has been Chairman of the Supervisory Committee, Member of Standing Committee, Chairman of Trade Union, Director of Blue Alliance.

Chen Taiqing, Chen Yiqin, Zhou Wenqi, Chen Taisong serve as members of the board of supervisors.

Table 8: SWOT analysis

Source:author analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> ▶ Abundant material resources; ▶ The geographical position is superior; ▶ Big brand awareness; ▶ Good quality; ▶ The high value goodwill; ▶ Strong human resources; ▶ Strong network marketing platform; 	<ul style="list-style-type: none"> ▶ Insufficient investment in R&D expenditures; ▶ The marketing effect is not ideal; ▶ The company's ability to manage funds needs to be improved; ▶ The target market is not clear; ▶ Lack of international market;
Opportunities	Threats
<ul style="list-style-type: none"> ▶ The development prospects of emerging markets are huge; ▶ M&A, joint venture or strategic alliance.; ▶ Enter an attractive new market segment; ▶ The international market expansion; 	<ul style="list-style-type: none"> ▶ The macro-environmental impact; ▶ Government regulations and policies; ▶ Tax policy; ▶ Trade Tariffs; ▶ The threat of alternatives; ▶ Intensified competition among enterprises;

Porter's five forces

Porter believes that there are five basic types of competitiveness in every industry. For this purpose, this section will cite Porter's "Five Competitiveness Analyses", in the development of the liquor industry from five perspectives: potential entrants, suppliers, buyers, and industry substitutes and existing competitors to analyze.

Threat of new entrants-Low

In recent years, the entire liquor industry has been affected by policies. The market is weak and difficult. The liquor companies are faced with more or less confusion. The prices of liquor products are falling. The mainstream wine market is upside down. Many small liquor companies unable to bear the pressure of losses, they all closed down. According to expert analysis, one-third of the liquor companies will be closed in the future. In addition, under the influence of nation policy, the consumption of high-end liquor has been greatly affected, and the product structure of the entire industry has begun to adjust. Competition in liquor products has gradually shifted from the competition in the high-end market to the middle-end market. On the one hand, with the reduction of official consumption, the demand for high-end liquor will not recover in the short term. The current high-end liquor customers mainly focus on business consumption, and they prefer national high-end first-line brands and some regional high-end products. Its recognition of the brand is relatively fixed, with limited market growth. On the other hand, the mid-end liquor market is mainly based on rigid demand, and it is less affected by the will of the high-end consumer, with a higher degree of marketization and a broader market space. The original mid-market was mostly occupied by regional second-tier liquor companies. As the input of first-tier white spirits to the mid-end market has increased, the competition in the mid-end liquor market has gradually increased. In this context, the current liquor industry in China is facing a profound adjustment. In a period of time, there will be no new companies entering the market and there is no need to worry about the threat of new entrants.

Bargaining power of suppliers-Low

For the liquor industry, its main suppliers of raw materials are sorghum, wheat, corn, and potato and other agricultural products. Therefore, suppliers of the liquor industry are mainly enterprises or organizational structures that are closely related to farmers, such as large planters or farmers' cooperatives. As a large agricultural country, the sale of agricultural products has become a concern for farmers. Therefore, the overall price of agricultural products is not very high. For the liquor industry, high-quality raw materials can be obtained at a lower cost.

Bargaining power of customers-Low

The purchaser is mainly reflected in the sales channels of the liquor industry. In the past, due to limited sales channels, liquor companies were often under pressure from wine dealers. In order to cope with the price reduction, liquor companies often have their own franchised stores, such as Kweichow Moutai, just across the country. The establishment of franchised stores in Moutai is widespread. However, the establishment of franchised stores also means an increase in the cost of sales. In particular, since the "eight provisions", the liquor industry has experienced an unprecedented decline in sales, which has caused liquor companies to have to mass-proceed large stores. However, with the advent of the Internet age, the liquor industry has also catered to the "Internet +" innovation craze, which has solved the difficult problem of sales channels and has inhibited the buyer's bargaining power. This shows that for the liquor industry, it is now in a transitional period. The introduction of the Internet has made the liquor industry closer to consumers and increased control over liquor products prices.

Threat of substitutes-Significant

As substitutes of Liquor, wine is healthy, beer's price is very low. Moreover, after China entered WTO, the tariffs on foreign spirits entering China dropped, which resulted in a large amount of foreign spirits poured into the market. With the development of economy and the change of people's life concept, the market has gradually tended to be younger. Traditional strong liquors cater to people aged over middle age, but young people are not used. Beer, wine, and pre-mixed drinks are more favored by the market. Obviously, the liquor industry is facing a serious threat to alternatives.

Industry rivalry- Moderate

There are 19 Liquor listed companies in China which means there are diversified competitors in Liquor industry. However, as mentioned before, different regions have different preference of brands. With the high regional protection, the industry rivalry is moderate.

In China's liquor industry, no matter what kind of market, the competition within the industry is fierce. Many wine companies not only occupy the market in a class of

Figure 8: Porter's Five Forces

Source:author analysis

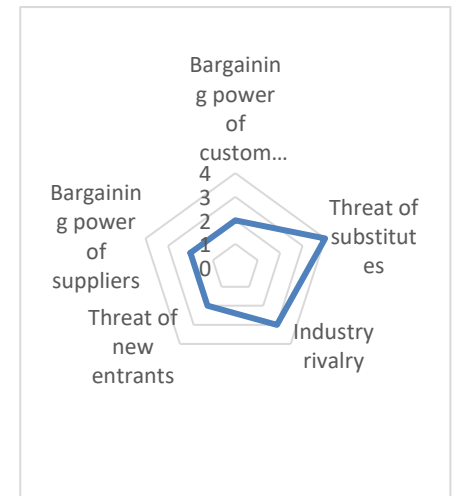
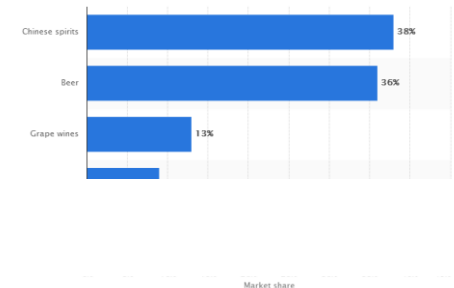


Figure 9: Market share of various types of alcoholic beverages

Source:Statutory reports and author analysis



markets, but also occupy important shares in different markets, such as Jiangsu Yanghe, Wuliangye

Jiangsu Yanghe's Core Country Outlook

China

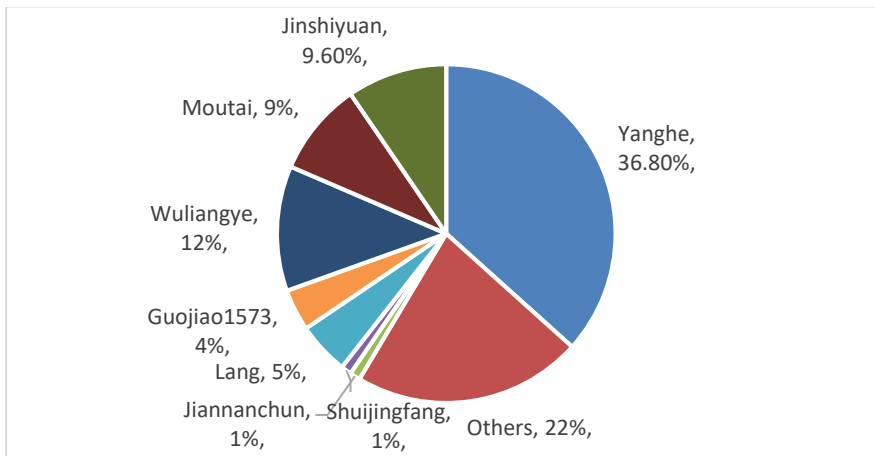
The GDP in China was worth RMB 82712.2 billion in 2017. The GDP value of China represents 18.06% of the world economy. The real growth rates continue to deaccelerate from 6.8% in 2017 to close to 5.8% in 2022. Inflation rate will increase from 1.56% in 2017 to 2.83% in 2022. Unemployment will continue to stay around natural levels close to 4%. China recorded a government debt equivalent to 47.60% of the country's Gross Domestic Product in 2017 and it will continue to increase to 63.07% in 2022.

In Jiangsu Province

During the golden decade of the liquor industry, Jiangsu Yanghe achieved rapid growth in revenue through the expansion of the market in Jiangsu Province. Using differentiated marketing of products and brands, the successful innovation of brand image stood out from many famous wines and established the company's leading position in the provincial market. At present, the company's provincial market share is 36.8%, far ahead of its main competitors. Liquor's market price of more than ¥100 in Jiangsu Province is mainly occupied by Jiangsu Yanghe, Jinshiyuan, Guizhou Moutai, Wuliangye, Luzhou Laojiao, Langjiu, Jiannanchun and other brands, and the main sales area is in southern Jiangsu. The economy of Jiangsu Province is developed. The per capita disposable income of Suzhou, Wuxi, Changzhou and Zhenjiang is high, and it is easy to attract national brands. In addition, there is no well-known liquor brands in southern Jiangsu, giving the opportunity to enter the strong brands outside the province.

Figure 13: Jiangsu Yanghe has a large market share in Jiangsu

Source: Statutory report and author analysis



In this round of national consumption upgrade, the demand continues to increase for sub-high-end liquor in Jiangsu market with outstanding economy and frequent business activities.

In 2017, the persona, and the performance in southern Jiangsu is even better. The product between ¥300 and ¥500 has become the most obvious liquor price belt in Jiangsu Province. Liquor consumption in the North Jiangsu market has entered the ¥200 position.

By strengthening the sinking of channels in the province, Jiangsu Yanghe is expected to further capture the market share of high-end brands and increase its market share in the province.

Figure 15: Percentage of Revenue in Jiangsu and the rest of China

Source: Wind

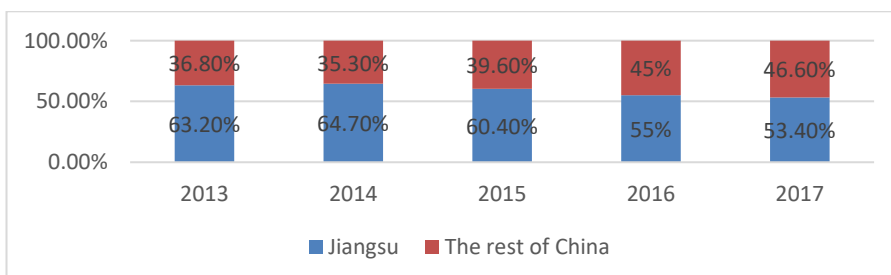


Figure 10: China: growth rate of real gross domestic product (GDP) from 2010 to 2022

Source: statista

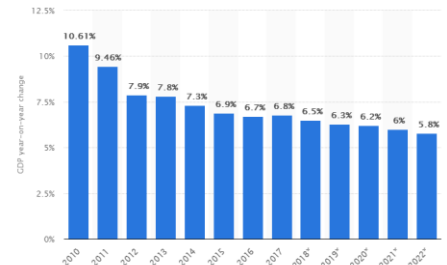


Figure 11: China: inflation rate from 2012 to 2023

Source: statista

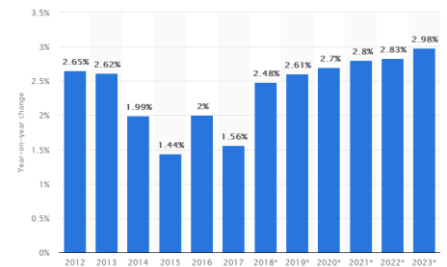


Figure 12: China: unemployment rate from 2012 to 2023

Source: statista

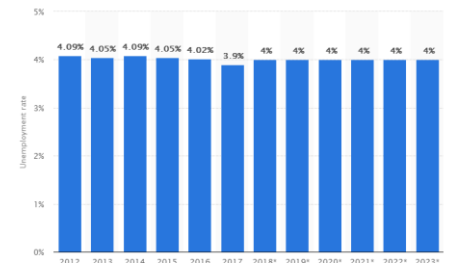
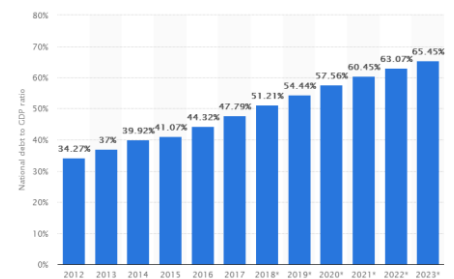


Figure 14: national debt from 2012 to 2023 in relation to gross domestic product (GDP)

Source: statista



New Jiangsu Market

In 2013, the industry entered a stage of adjustment, and the income of Jiangsu Yanghe Province's external market fell into negative growth. In the face of difficulties, the company made full use of its strong deep distribution capabilities and actively expanded into Henan, Anhui, Zhejiang, Shanghai, Shandong and other regions, named the new Jiangsu market.

Today, the new Jiangsu market has expanded from 298 stores planned in early 2015 to 455 stores in 2017. The strength of the new Jiangsu market has also driven the development of the company's out-of-provincial business, which is an important driving force for the company to rise against the trend during difficult times.

In 2017, the company's out-of-province market revenue share increased to 44.6% of total revenue, and increased by 14.68% YOY. The new Jiangsu market revenue accounted for 80% of the out of province in Jiangsu Yanghe, and the average growth rate of the new Jiangsu market reached 30%. The success of the "new Jiangsu market" model and its reproducibility will undoubtedly tap into more potential for the company's nationalization process.

Figure 20: New Jiangsu market map

Source: Company presentation

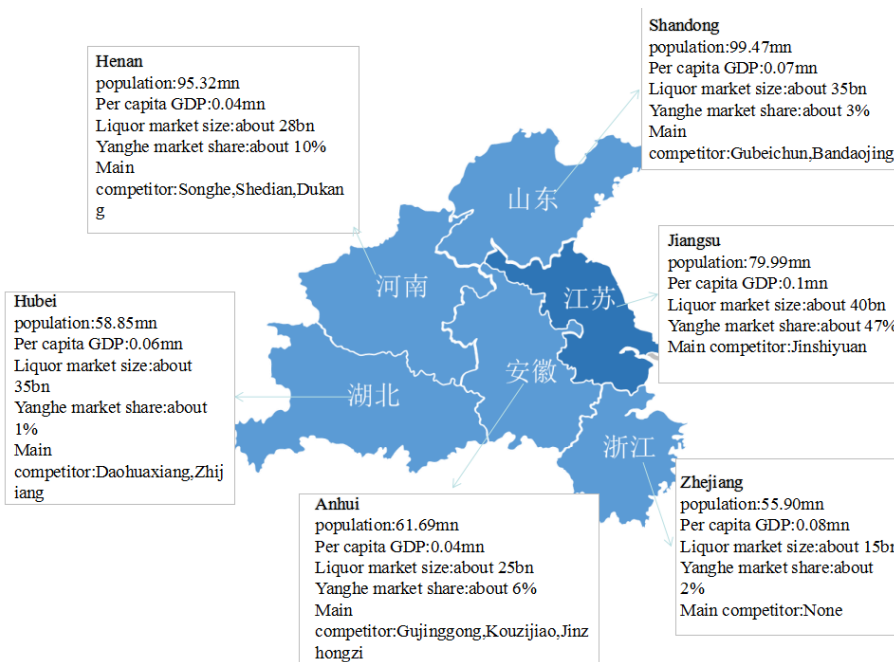


Figure 16: Jiangsu Province's income growth rate

Source: Wind

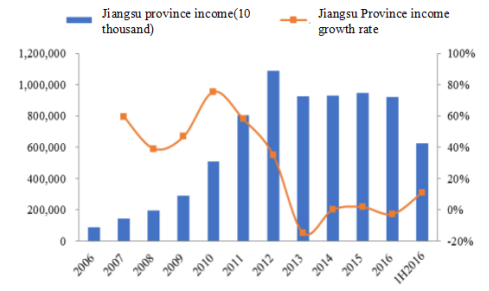


Figure 17: Out-of-province market growth rate exceeds provincial market growth rate

Source: Wind

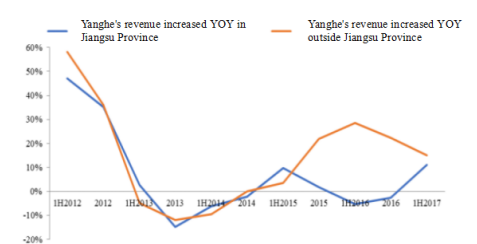


Figure 18: Jiangsu Yanghe key market revenue percentage

Source: Wind

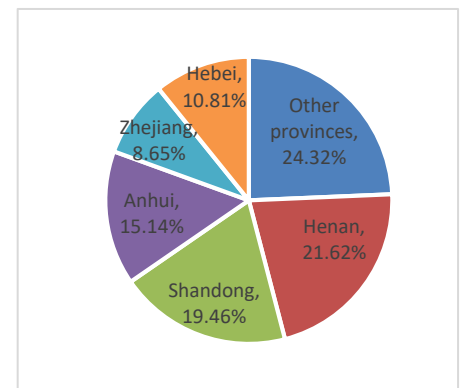
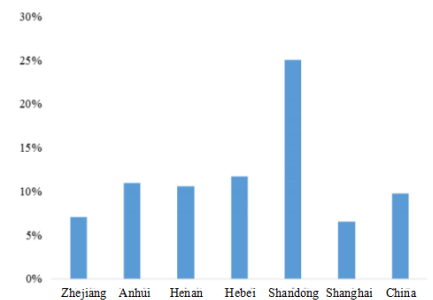


Figure 19: The average growth rate of residents' consumption level in the new Jiangsu market

Source: National Bureau of Statistics



Industry Outlook

External environment analysis

The understanding of the external environment can give us the opportunities and challenges Jiangsu Yanghe face. Therefore, this section analyzes the external environment of Jiangsu Yanghe through the three perspectives of macro environment, industry environment, and market demand in order to grasp the status quo and changes in the environment. So that Jiangsu Yanghe can take advantage of opportunities conducive to the development of enterprises, to avoid threats that may bring to the company.

Macro environment analysis

The macroeconomic environment of an enterprise includes political and legal factors, economic factors, social and cultural factors, and technical factors. The following sections will focus on analyzing each aspect of the macro-environment that Jiangsu Yanghe faces.

National policy analysis

On the one hand, since the convening of the party's 18th and 3rd Plenary Sessions in 2013, the country has fully initiated the reform and transformation and has taken the road of honesty, especially for liquor products. The consumption restriction policy will be normalized and institutionalized, which will also lead to a significant drop in the overall liquor industry revenue, and even the loss of most liquor companies. In this round of turmoil, the current liquor industry is still in a period of deep adjustment, facing multiple challenge. The overall consumption of liquor will be reduced, and it will enter the new normal of low-speed growth. And going to official consumption, government consumption will be the future of the liquor industry, commercial consumption, personal consumption and other mass consumption will become the mainstream.

Tax policy analysis

From the tax system reform in 2008, the corporate income tax rate was reduced from 33% to 25%. The major tax advantages are that the burden on the domestic liquor industry has been greatly reduced, which has brought about the increase in the prices of high-end, especially fine wines. The pressure has been eased, the profitability space has increased, and the market competitiveness of enterprises has been enhanced. This round of tax reform is undoubtedly a great advantage for Jiangsu Yanghe.

Economic Analysis

The long-term increase in disposable income has increased residents' spending power and formed the basic drivers of demand expansion. From 2002 to 2017, the per capita income of urban households increased from 7,703 yuan to 36,396 yuan, an increase of nearly 5 times, and the annual compound growth rate reached 11%. At the same time, with the increase of urbanization rate, the overall purchasing power of society has been significantly improved. The China Consumer Trend Report released by BCG predicts that the number of middle-class and wealthy households in China is expected to increase from ¥53 million in 2015 to ¥98 million in 2020, with an average annual growth rate of nearly 13%.

Social and cultural factors analysis

With the improvement of residents' cultural level, consumers' health awareness further being enhanced. Drinking less alcohol and drinking good wine have become consumer trends, and simple consumption has become increasingly popular. The mainstream consumer groups are gradually aging, and there is a risk of losing traditional liquor consumption groups.

Technical factors analysis

Science and technology is a powerful driving factor in the development of the liquor industry. With the further development of technology, the use of bioengineering and other high technology to enhance the traditional liquor industry has become possible, which also effectively improves the technical barriers of the liquor industry. In addition, as China's economic development enters a new normal of growth phase shift period, structural adjustment and pain period, and the first three-phase superposition of stimulation policy digestion period, the liquor industry will be deeply "electric shocked", and the use of the Internet to achieve intelligent liquor sales becomes a new smart marketing. In addition, changes in economic development momentum and policies have enabled liquor companies to shift from opportunistic to interoperable, speed to quality, and extensive to intensive and refined.

Market demand

At present, the consumer groups are experiencing rapid iterations. People born in the 1980s and 1990s gradually became the main force of the middle class and even the affluent class. They have higher requirements for product quality and a stronger willingness to consume for quality products. We believe that the process of consumption upgrading is expected to accelerate further, and the market space for high-end and sub-high-end liquor will accelerate.

Figure 21: Liquor industry's annual output and growth rate

Source: Wind

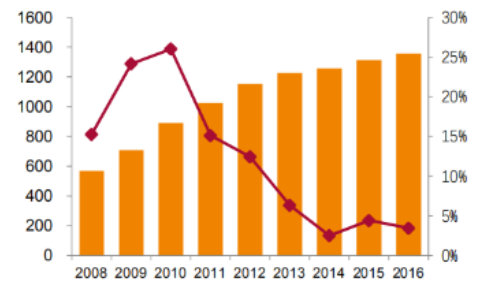


Figure 22: Liquor industry's annual sales and growth rate

Source: Wind



Figure 23: Per capita income of urban households

Source: Wind

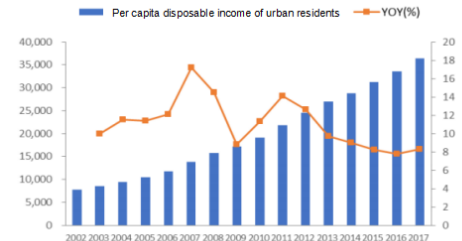
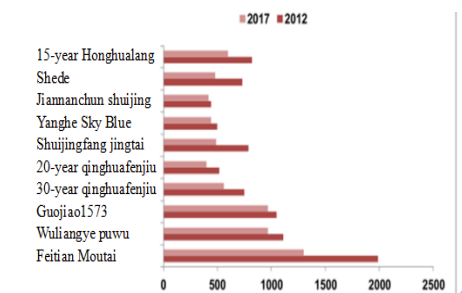


Figure 24: Sub-high-end liquor price moves down(yuan)

Source: Statutory report and author analysis



From the perspective of sales volume and market size, the mid-end and low-end liquors with a single bottle price below ¥300 still account for a large proportion of the industry. With the price increase of high-end liquor such as Moutai Wuliangye Luzhoulaojiao, the sub-high-end liquors price/performance ratio has been improved, attracting more low-end and mid-end demand to move to the sub-high-end.

From 2014 to the present, in the economically developed areas like Jiangsu and Zhejiang, in business, family gatherings and wedding banquets, more than ¥300 of products have been replaced by a large number of products of about ¥100. Taking into account the differences in regional economic conditions, this trend of product structure of liquor industry upgrades will also gradually emerge in other regions of the country in the coming years.

Table 10: Analysis of different grades of liquor

Source: Statutory report and author analysis

Market segments	Government consumption ratio	Business consumption ratio	Mass consumption ratio	CR3
High end	2%	60%	38%	95%
Sub-high end	7%	58%	35%	40%
Middle end	5%	25%	70%	4.90%
Low end	0	15%	85%	4.60%

Table 9: Different grades of liquor brand

Source: Statutory report and author analysis

Type	Price range	Representative products
High-end	>500 yuan/bottle	Maotai, Wuliangye, Guojiao1573
Sub-high-end	300-500 yuan/bottle	Jiannanchun, Shuiji ngyang
Middle-end	100-300 yuan/bottle	Sky/Sea Blue, Gujing
Low-end	<100 yuan/bottle	Erguotou, Jin

Financial Analysis

Profit & Loss

The total revenue from the FY15A-16A and FY16A-17A saw a increase of 7.05%(¥16.06bn to ¥17.18bn) and 15.92%(¥17.18bn to ¥19.91bn). These improvements were fundamentally driven by GDP and Jiangsu Yanghe's marketing strategy(see Figure 33 and 34). From the perspective of the company's income structure, the increase in the production and sales of the main liquor and the average price is the main source of revenue growth. In fact, the revenue from liquor accounted for 95.4% of Jiangsu Yanghe's total revenue in FY15A, 96.0% in FY16A,96.3% in FY17A.

The blue classic series has a high proportion of revenue: in 2017, the company's blue classic series accounted for more than 70% of total revenue. According to the report,Sea Blue, Sky Blue and Dream Blue series accounted for 30%, 20% and 20% respectively, with scales of ¥5.7 billion, ¥3.5 billion and ¥4.5 billion respectively. In recent years, the company has focused on promoting Dream Blue, launching high-end and promoting blue classic structure upgrade. Dream Blue series M3 accounted for about 45%, M6 accounted for 40%, and M9 is Jiangsu Yanghe's benchmark because of its high price positioning. Undertaking the company's brand propaganda obligations, the actual transaction is less, accounting for about 3%

Table 11: Revenue of Jiangsu Yanghe products in 2017

Source:Statutory report and author analysis

Product	Price	Product Positioning	Income scale	Percentage of Revenue
Sea blue	149 yuan	Middle end	5.7bn	30%
Sky blue	359 yuan	Sub-high end	3.5bn	20%
M3	489 yuan	Sub-high end	2.0bn	10%
M6	689 yuan	High end	1.8bn	9%
M9	1289 yuan	Ultra high end	0.7bn	3%

Cost of revenue, including COGS,SG&A, sales tax, and other operating expenses increase from the ¥10.0 billion in FY16A to ¥11.7bn in FY17A.The biggest component of the operation expenses is COGS, totaling 57% of total and it increased by 7% in FY17. The growth rate of cost and the growth rate of production are similar, and the increase in the average selling price brings about an increase in gross profit margin. In the period of rising prices of high-end liquor, there is room for price increases in the sub- high-end liquor. In 2012-2014, Jiangsu Yanghe actively expanded the out-of-province market, and the sales expense ratio increased slightly. As the company's our-province market development has entered the harvest period, it is expected that the future sales expense ratio will be stable, the company's product structure will be upgraded, and the gross profit margin will increase. The operating expense rate is stable and is expected to lead to an increase in the net interest rate. **Pre-tax earnings** increased from ¥7.76bn to ¥8.84bn and net earnings from ¥5.80bn to ¥6.63bn, leading to basic EPS of ¥3.87 in FY16 and ¥4.40 in FY17.

Looking for the **gross profit margin**, it exhibits a slight increase in FY15A (up 10.5%, from ¥9.9bn in FY15A to ¥11.0bn in FY16). From FY16 to FY17, we witnessed to a further increase of 20.6%, from ¥11.0bn to ¥13.2bn, respectively. From the details of the income statement, the tax and surcharges have increased by about 800 million, which is the reason why the profit growth rate is not as good as the revenue.

Jiangsu Yanghe's consolidated reported **EBITDA** amounted to ¥8.52bn in FY17 and ¥9.59bn in FY17.

Dividends declared totaled ¥21 per share in FY17, comparing to the ¥18 in FY16,accounting for 49.6% and 48.13% of total revenue.

Balance sheet

Total asset closed at ¥43.3bn in FY17,a increase of 11.5% from the ¥38.8bn in FY16. **Cash and cash equivalents** had a negative variation of ¥1.8bn mainly due to negative net cash flow from investing activities and financing activities in FY17, because expanding investment in the outside provincial market and pay for dividend. The cash flow from operating activities was ¥6.9bn, because of the other current liabilities decreased from ¥2.5bn to ¥0.9bn. As can be seen from the balance sheet, **available-for-sale financial assets** have increased by about 2 billion. It can be found in the "Available for Sale Financial Assets" section of the note, which is mainly invested in trust funds. In total asset, **inventories** and **the other current assets** account for the largest proportion, 64.6% and 65.3%, respectively. Inventories increased from ¥12.2bn in FY15 to ¥12.9 in FY16.Other current asset increased from ¥10.1bn to ¥13.0bn, from the "other current assets" of the notes, the company has also invested about 12.8 billion short-term wealth management products. Continue to find the "investment

Table 3: FY17 key metrics

Source:Statutory reports

	FY17	Δ YOY
Net Revenue	19.9bn	15.90%
Pre-tax Earning	8.85bn	14.00%
Net Income	6.62bn	13.70%
Diluted EPS	4.4	13.70%
ROE	23.85%	0.27%
BVPS	22.33	14.10%

Figure 25: EBIT margin &Net profit margin

Source:Statutory report and author analysis

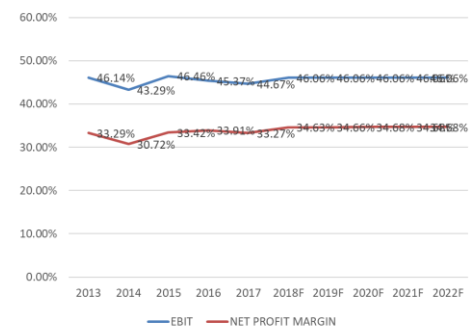
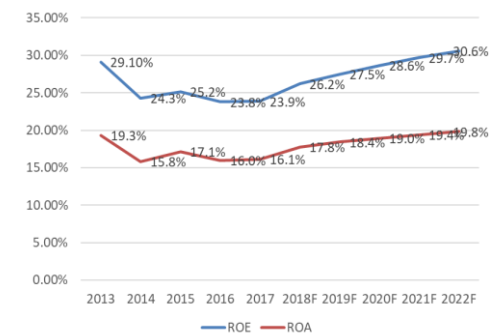


Figure 26: ROA&ROE

Source:Statutory report and author analysis



income" notes, it can be seen that the company used about 16.3 billion investment funds to obtain about 624 million yuan of income, investment return rate of 3.82%. And receivables also increased from ¥0.27bn to 0.28bn. **Fixed asset** increased from ¥8.0bn in FY16 to ¥8.4bn, a rise of 3.5%. **Intangible asset** increased a little as 1.1% from ¥1.63bn to ¥1.65bn.

Liabilities increased from ¥12.8bn in FY16 to ¥13.8bn in FY17. The main drivers for this variation were (i) rise of 9.2% in deposits, totaling ¥4.2bn in FY17; (ii) increase of 19.1% in payables to ¥6.73bn.

Total shareholders' equity remained increase in FY17 at ¥29.5bn, rise of 13.3% from ¥26.1bn in FY16. The main components of shareholders' equity in FY1 except **retain earnings** increased from ¥26.0bn in FY16 to ¥26.5bn, the others like share capital, accumulated other comprehensive income, total reserve are almost same as previous year.

Valuation Methodologies

The logic for conducting a company valuation is "value determines the price." The valuation methods of listed companies are usually divided into two categories: one is relative valuation method (such as P/E valuation method, P/B valuation method, EV/EBITDA valuation method, etc.); the other is absolute valuation method (Such as DDM, free cash flow discount model valuation, etc.).

1)Relative valuation method

The relative valuation method is simple and easy to understand, and it is also the most widely used valuation method for investors. Among the relative valuation methods, the commonly used indicators are price-earnings ratio (PE), price-to-book ratio (PB), EV/EBITDA multiples, etc.

2)Absolute valuation method

The DDM and the DCF model use the CAPM to predict the company's future dividends or fFCF, and then discount it to obtain the intrinsic value of the company's stock.

I use these two methods P/E and EV/EBITDA to value Jiangsu Yanghe, it will give the company a more accurate valuation.

In valuing Jiangsu Yanghe we follow a Discounted Cash Flow (DCF) Approach, for several reasons. Firstly, we are able to obtain comprehensive data, which make it possible to estimate enterprise value. Secondly, a Dividend Discount Model is not suitable, as Jiangsu Yanghe's dividend distribution is uncertain. By using a DCF approach, we estimate the Free Cash Flow to the Firm (FCFF).

Calculation of the discount rate

The discount rate applied to the future cash-flows must reflect not only the time value of money, but also the specific risk country where the company operates. Because we follow a DCF approach and estimate company's FCFF, the discount rate is the one that results from the Jiangsu Yanghe's Weighted Average Cost of Capital ("WACC").

$$WACC = W_e * K_e + W_d * K_d (1-T)$$

We used the Capital Asset Pricing Model (CAPM) to calculate cost of equity (Re), as the discount rate. The capital asset pricing model (CAPM) is generated as one of the forecasting models based on the expected return of risk assets. CAPM elaborated on the formation of market equilibrium under the conditions of investors using Markowitz's theory for investment management. The theoretical relationship between the expected return of the asset and the expected risk is expressed in a simple linear relationship. That is, there is a positive correlation between the expected return on an asset and its systematic risk of the asset:

$$R_e = R_f + \beta * (R_m - R_f) + CRP$$

Among them, R_f (Risk free rate) is a risk-free rate of return, It's currency time value; β is the Beta coefficient of securities, R_m is the Expected Market Return, and $(R_m - R_f)$ is Market Risk Premium. the first right side of the CAPM formula is a risk-free rate of return. The typical risk-free rate of return is a 10-year Treasury bond's yield for the United States government. If a stock investor needs to take on additional risks, then he will need to get a corresponding premium based on the risk-free rate of return. Then, the market risk premium is equal to the market's expected rate of return minus the risk-free rate of return. The securities risk premium is the multiplying of a measure of systematic risk (beta) and the market risk premium. CRP refers to the difference between the higher interest rates that less stable and riskier countries must pay to attract investors.

► **Risk-free rate:** The risk-free rate of return refers to the rate of return that can be obtained by investing funds in an investment object without any risk. This rate of return is generally used as a basic benefit, taking into account the various risks that may arise. The determination of risk-free rate of return plays a very important role in fund performance evaluation. Various traditional performance evaluation methods use risk-free rate of return indicators. Under the current conditions of China's stock market, there is actually no uniform standard for the choice of risk-free rate of return. In the international arena, the short-term government bond yield is generally used as the market risk-free rate of return. We have chosen 10-year Treasury bond's yield for the United States Government. It is considered a AAA credit rating, this rate was 3.7% at 26-09-2018.

► **Beta:** Beta is an important indicator of the degree of risk variation of a single security or portfolio of securities relative to the securities market system. Through the calculation of the Beta, investors can derive the market risk situation that a single securities or portfolio will face in the future. Usually the Beta is calculated using historical data, and whether the Beta calculated by historical data has certain stability. Will directly affect the application effect of the Beta. We assumed that the level of regulation won't change in the next years, we used the Beta of Jiangsu Yanghe in Bloomberg, it is 0.74.

► **Market risk premium:** The market risk premium is the difference between the expected return on a market portfolio and the risk-free rate. The market risk premium

should be the general risk premium for a mature equity market, according to Damodaran's database, we use 5.9% as market risk premium.

► **CRP:** The country risk premium refers to the difference between the higher interest rates that less stable and riskier countries must pay to attract investors, and the interest rates of an investor's home country. In China, the CRP is 0.8%. This is the premium associated to the sovereign current credit rating of BB+, as presented by S&P. The CRP was computed by us, following Damodaran's methodology and resorting to Capital IQ database.

The total estimates Cost of equity is 8.83%. This value is comparable to those applied by market analysts to comparable companies.

► **Effective tax rate**

We have considered an effective tax rate of 25.2% in the valuation analysis. This rate was estimated according to the most recent changes of the China's Law

► **Cost of debt**

To determine the cost of debt, we use the interest rate that a company was paying on its historical debt. It's 0.05%.

Taking into consideration all the parameters mentioned above, the discount rate (WACC) was estimated at 8.61%.

Terminal value

When the value of an asset is valued by the discounted cash flow method, since the cash flow is difficult to estimate reasonably after a certain period of time, the future cash flow is usually not estimated indefinitely, but use terminal value approach simplifies the calculation. For example, starting from the 13th year, the annual cash flow assumption grows at a certain rate. In this case, the final value is the cash flow that is assumed to grow at a fixed rate, converted to the value of the end of the 10th year. TV was calculated by multiplying the expected return of FY2022F, subtract amount of cost of equity and then divide by the difference between the cost of equity and the terminal growth rate. The WACC terminal growth rate was 2%.

Discount convention

On what concerns to present value calculation, we have assumed the mid-year convention to discount, which is in line with the generally accepted practices used by financial analysis practitioners.

Valuation period

We considered a limited period ranging from the base date 31th December 2018 and 31th December 2022, with the terminal value being add at the end of this period. We considered this period, according the maturities of both company and industry, from a theoretical point of view, the valuation period would extend to infinity. For longer periods would be very difficult to forecast all the necessary parameters.

Multiples

As we mentioned before, the Chinese liquor industry is a specific and traditional industry. Therefore, we choose the peer group only from the Chinese liquor companies. In total, there are 19 listed companies in the Liquor industry. Due to the quality and price of production in the market, we can distinguish three types of competitors, the High-end Liquor Companies, such as, Moutai, the Mid-end Liquor Companies like Luzhou Laojiao, and the Low-end Liquor Companies like Tuopai Shede, etc.

At this point, we left with a reasonable amount of potentially comparable firms.

To value Jiangsu Yanghe through market approach, we use multiples based on reason mentioned in previous sections, applied P/E ratio, P/B ration P/sales and EV/EBITDA valuation method.

We choose 5 companies as comparable companies, high-end Moutai, mid-end Wuliangye, Shuijingfang, Shanxifenjiu, low-end Jiugujiu. We also calculated Jiangsu Yanghe multiples (Table). Then we got fair price from multiples is ¥134.4.

Financial Statements: Forecast

Revenue

The adjustment of the company's provincial market has ended, and the double-digit growth has been resumed. The growth rate out of the provincial market is faster, and the future volume is expected to surpass the provincial part. With the gradual elimination of the impact of the consumption tax, the company's performance in the future years is expected to accelerate growth again.

Industry average growth rate is 9.82%, but Jiangsu Yanghe has a good prospect. From FY2018F, revenue is expected to increase from its previous trend (CAGR FY13A-FY17A of 7.51%) to CAGR of 20% with the product structure updating.

Operating expenses

The operating expenses forecast based on historical trends and both historical trends and forecasted revenues, it forecast 58.3% based on a 5 year historical average as a percentage of revenue

Capex

Jiangsu Yanghe's Capex is mostly used for maintenance and expansion of the factory. Since 2013, Jiangsu Yanghe has invested a large amount of money in the expansion of the plant. Currently, maintaining equipment is the main capital expenditure. We will increase capex as well as in fixed assets that enable the development of the business.

Jiangsu Yanghe's working capital requirements arisen essentially from the developing the market outside the province and creating brand.

Equity capital structure

As the company does not have preferred stock, the current common stock repurchase and issuance strategy will not change. The dividend payout rate is calculated based on the expected central bank interest rate growth and may change slightly.

Return on Equity shows an upward trend, having registered 23.8% in FY16A, 23.9% in FY17A. According to our estimates, ROE will continue to increase in FY18F, reaching 30.6% in FY22F

Figure 27: Jiangsu Yanghe Revenue forecast 2018-2022

Source: Statutory reports and author analysis

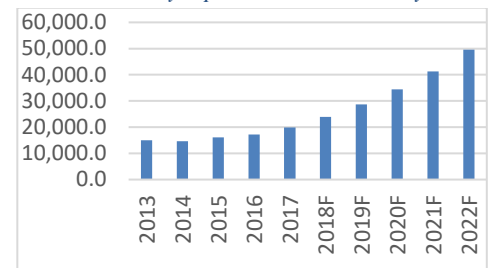


Figure 28: Operating expenses forecast 2018-2022

Source: Statutory reports and author analysis

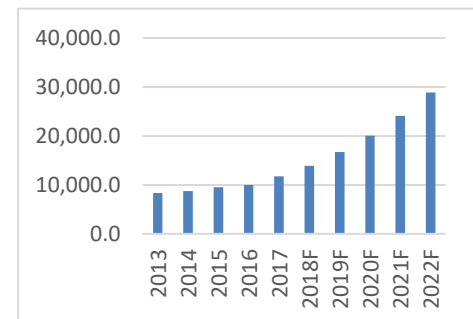
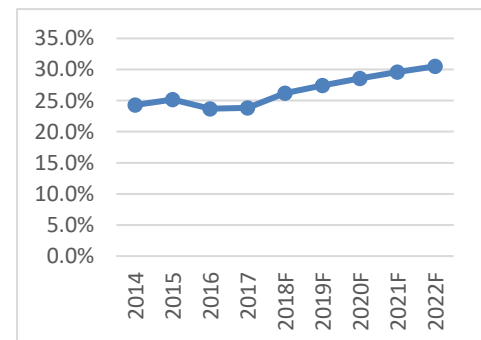


Figure 29: Return on equity forecast 2018-2022

Source: Statutory reports and author analysis



Investment Risks

The group is exposed to various financial risks in the ordinary course of business, mainly including: Credit risk, Liquidity risk, Market Risk, etc. The company's management is fully responsible for the formulation of risk management objectives and policies, and takes responsibility for risk management objectives and policies. The objective of the Group's risk management is to identify and analysis risk, minimizing the adverse impact of financial risks without excessive influence on the company's competitiveness and resilience.

Market risk: Interest rate risk (MR1, Figure 30)

Interest rate risk refers to the fair value of financial instrument or future cash flow fluctuates due to the fluctuation of interest rate. The risk of changes in interest rates faced by the company is mainly related to the company's loan amount.

Market risk: Foreign exchange risk (MR2, Figure 30)

Foreign exchange risk arises from fluctuation in exchange rate, relevant to the assets and liabilities in foreign currency. The company's import and export business is relatively small, and the exchange rate changes have less impact on the company's operations.

Market risk: Credit Risks (MR3, Figure 30)

Credit risk refers to the risk that one party of the financial instruments fails to perform its obligations and causes the financial losses of the other party. Credit risk mainly related to accounts receivable. Company mainly trade with franchiser, according to company credit policy, adopts the way of delivery after the payments finished. For some group purchase business, only deal with the reputable group clients, and continuously monitor the balance of accounts receivable, as a result, there is no collateral required, credit risk management concentrate on the clients. The balance of accounts receivable is small till December 31, 2017. The company does not hold any collateral or other credit enhancement for the balance of accounts receivable.

The other receivables are mainly deposits, security deposits and reservation fund, employee business loan and so on, which are related to infringement liability disputes. The company manages other receivables and continuously monitors its balance, to ensure the company does not face significant bad debt risks.

The amount included in account receivables which does not overdue, impaired, and financial assets overdue but not impaired, duration analysis are as follows:

Table 12: Receivables

Source: Statutory reports and author analysis

Item	Ending Balance				
	Within 1 year	1-2 years	2-3 years	Over 3 years	Total
Account receivable	5,149,816.55	3621893.9	12493.33	2049351.46	10,833,555.19
Other receivable	14,638,635.49	2497442.1	7213051.26	14839793.55	39,188,922.37
Item	Beginning Balance				
	Within 1 year	1-2 years	2-3 years	Over 3 years	Total
Account receivable	10,606,134.17	215155.07	634408.63	2070727.13	13,526,425.00
Other receivable	11,429,831.72	8983426.1	1027111.55	10310940.86	31,751,310.25

The impairment of company financial assets are Industrial And Commercial Bank Of China Limited Zhenzhou Jiefang Road Branch and Kaifeng Haode Branch 65,747,048.93 yuan deposit of Other receivable, the security deposit pay to Jiangsu Juntai Properties Co.,Ltd., Suqian Guotai Department Store Co.,Ltd. bankruptcy administrator 15,000,000.00 yuan, bad debts provision of individual event is 47,839,924.27 yuan, and investment to Suqian Traffic Investment Company Limited of available-for-sale financial assets measure by cost is 948,000.00 yuan, full provision is made for available-for-sale financial assets impairment provisions.

Liquidity risk (LR1, Figure 30)

Liquidity risk refers to the risk of capital shortage when enterprise performs its obligations related to financial liabilities. The company uses various financing methods such as bill clearing and bank loan to optimize the financing structure and maintain the balance between financing continuity and flexibility.

The company's financial liabilities according to the expiration of the remaining contract obligations as follows:

Figure 30: Jiangsu Yanghe's risk matrix

Source: Author analysis

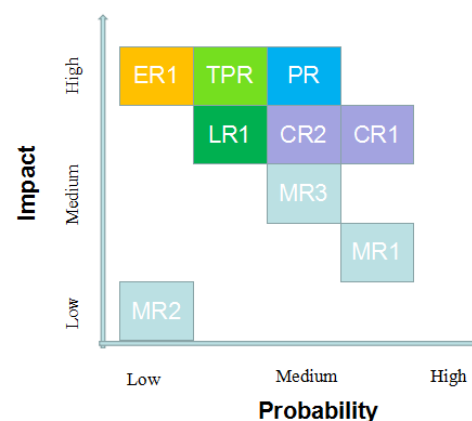


Table 13: Jiangsu Yanghe's financial liability

Source: Statutory reports and author analysis

Item	Ending Balance				
	Within 1 year	1-2 years	2-3 years	Over 3 years	Total
Notes payable	8,200,000.00				8,200,000.00
Account payable	1,111,403,574.47				1,111,403,574.47
Other payables	5,620,040,515.94				5,620,040,515.94
long-term loan		145,452.00			145,452.00
Special payable				199,107,530.75	199,107,530.75

Item	Beginning Balance				
	Within 1 year	1-2 years	2-3 years	Over 3 years	Total
Notes payable	960,000,000.00				960,000,000.00
Account payable	784,213,000.76				784,213,000.76
Other payables	4,867,632,425.33				4,867,632,425.33
long-term loan			181816		181,816.00
Special payable				199,978,943.07	199,978,943.07

Economic risk (ER, Figure 30)

At present, the external environment for the development of the international economy is unpredictable, which may bring about a certain impact on China's sustained high-speed economic growth. Once unpredictable or uncontrollable changes occur in the domestic macroeconomic environment or industrial policies, it will affect the health development of liquor industry or liquor companies.

Police risk (PR, Figure 30)

In 2013-2014, the industry entered a deep adjustment period due to restrictions on policies such as "three public consumption". After two years of in-depth adjustment, the industry's own accumulated ills have been cleared, channel inventory has been cleared, and the consumption structure has continued to improve. The proportion of party, government, and military consumption has shrunk dramatically, and the current proportion is less than 5%. Benefiting from the consumption upgrade, mass consumption can be effectively undertaken, and the whole industry begins to recover in a healthier and more benign posture.

Tax policy risk (TPR, Figure 30)

From 2001 onwards, the state implemented a double standard levying consumption tax policy on liquor enterprises. The liquor company pays consumption tax 1RMB/kg plus from 20% of the sales price. In the past the liquor could avoid tax by setting special purpose vehicle. But from 2009, the state administration of tax start to verify the sales price in person. So the tax base is expanded. In the future, it is expected that government will implement fiscal policy on liquor industry due to stressed finance and environment reasons. Thus, the tax policy will increase.

Corporate risk: increased risk of market competition(CR1, Figure 30)

At present, the liquor market has started a new round of market competition. Famous wine enterprises have resumed rapid growth, optimized product structure, increased investment promotion efforts, strengthened channel construction, further ploughed into terminals, and market competition has become fiercer. At the same time, the liquor industry is facing the reengineering and reconstruction of prices, channels, and service systems, and it poses a serious challenge to whether companies can adapt to the new transitional changes.

Corporate risk: concept of consumption(CR2, Figure 30)

At present, as consumers pay more attention to the concept of healthy life, moderate and appropriate amount of rational drinking is advocated. At the same time, with the adjustment of the age structure of the drinkers, the preference for liquor consumption in daily life has decreased, and the consumption of alcoholic beverages has shown a diversified development trend. How to accurately grasp changes in consumption and lead the future consumption trend of liquor is a practical issue that the liquor industry and liquor companies need to face.

Risks to Price Target Analysis

Sensitivity analysis

We have performed a sensitivity analysis with the purpose of quantifying possible changes in YE18 price target due to changes on some key variables. These variables were defined recurring to the Crystal Ball software and analyzing which model's variables could most impact the price target if base assumptions were not observed. For the sensitivity analysis the simulation of 100,000 possible scenarios was conducted. In each scenario, different combinations of variables were tested to assess which variables have the greatest impact in the price target if base assumptions were not observed. We determined that the variables that created the greatest effect in the price target were: Market risk premium; Beta; Risk-free Rate; Country risk premium and Terminal Growth Rate.

Table 15: Jiangsu Yanghe's valuation sensitivity analysis

Source: Author analysis author

Terminal growth rate	β							
		0.59	0.64	0.69	0.74	0.79	0.84	0.89
3.50%	215.4	201.4	189.0	178.1	168.3	159.5	151.5	
3.00%	194.7	183.2	173.0	163.8	155.5	148.0	141.2	
2.50%	177.9	168.3	159.7	151.9	144.8	138.3	132.4	
2.00%	164.0	155.9	148.5	141.8	135.6	129.9	124.7	
1.50%	152.4	145.4	139.0	133.1	127.7	122.7	118.0	
1.00%	142.5	136.4	130.8	125.6	120.7	116.3	112.1	
0.50%	133.9	128.6	123.6	118.9	114.6	110.6	106.9	

Table 16: Jiangsu Yanghe's upside potential sensitivity analysis

Source: Author analysis

Terminal growth rate	β							
		0.59	0.64	0.69	0.74	0.79	0.84	0.89
3.50%	76.71%	65.20%	55.07%	46.08%	38.05%	30.83%	24.30%	
2.00%	34.57%	27.90%	21.85%	16.32%	11.26%	6.60%	2.30%	
1.50%	25.02%	19.28%	14.02%	9.19%	4.74%	0.62%	-3.19%	
1.00%	16.88%	11.88%	7.26%	3.00%	-0.95%	-4.62%	-8.04%	
0.50%	9.87%	5.46%	1.37%	-2.42%	-5.96%	-9.26%	-12.34%	

Notes to figure:

Green, grey, yellow and red stand for Buy, Neutral, Reduce and Sell, respectively.

Monte Carlo simulation

To complement the sensitivity analysis, we performed a Monte Carlo simulation (covering 100,000 simulations), using Crystal Ball, to test YE19 price target to the previously identified variables.

With a confidence level of 95.0%, the Monte Carlo simulation mean price target was ¥146.0, a median of ¥141.7 and a ¥26.3 associated standard deviation. The results conclude that there is a 95% probability that the YE18 price target for the Jiangsu Yanghe is between ¥85.2 to ¥634.5

To perform this simulation, we assumed a normal distribution for all variables and a respective standard deviation of 0.12 for the Beta, 0.4% for the risk-free rate, 0.5% for the market risk premium and 0.8% for the terminal growth value. The reasoning for these standard deviations are, respectively: derived from the STD of computed the Beta of Jiangsu Yanghe as the average of betas of the comparable companies; derived from the STD of 10-year Treasury bond's yield for the United States Government; derived from the STD of historical risk premium values; derived from the STD of the S&P Financial Index.

Table 14: Investment rating, by risk

Source: BPI Rating Scheme

	Low risk	Medium risk	High risk
Buy	>15%	>20%	>30%
Neutral	>5% and <15%	>10% and <20%	>15% and <30%
Reduce	>-10% and <5%	>-10% and <10%	>-10% and <15%
Sell	<-10%	<-10%	<-10%

Figure 31: YE18 Price Target Sensitivity

Source: Crystal Ball software and analysis

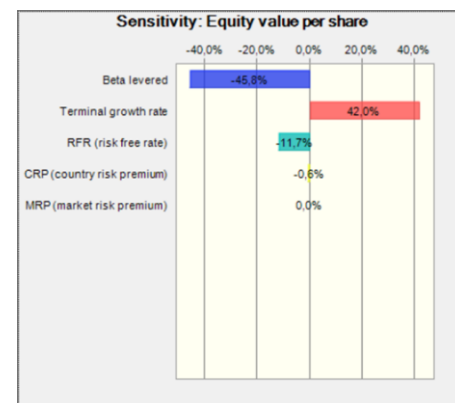


Figure 32: Monte Carlo price distribution

Source: Crystal ball software and author analysis

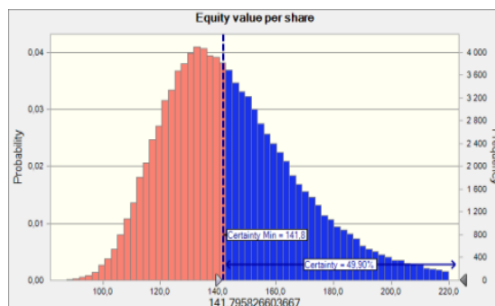


Table 17: Monte Carlo price percentiles

Source: Crystal Ball software and Author analysis

Percentiles	Forecast values	Upside Potential
0%	85.24	-30.08%
10%	117.39	-3.70%
20%	124.76	2.35%
30%	130.65	7.18%
40%	136.04	11.60%
50%	141.69	16.24%
60%	147.88	21.31%
70%	155.06	27.21%
80%	164.40	34.86%
90%	179.47	47.23%
100%	634.51	420.52%

Table 18: Statement of Financial Position

Source: Statutory reports and author analysis

In Millions of QNV except Per Share	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Assets										
Cash and Equivalents	7,854.8	4,347.0	4,707.8	2,456.6	1,751.5	1,562.0	2,359.7	3,235.1	4,208.7	5,305.0
Accounts Receivable - Trade	21.7	9.3	6.5	10.8	8.5	16.9	20.3	24.4	29.2	35.1
Inventories	8,779.3	10,097.0	11,122.4	12,221.5	12,861.5	15,882.0	19,058.4	22,870.1	27,444.2	32,933.0
Other Current Assets	0.0	1,445.3	4,983.9	10,065.2	12,996.4	14,798.1	17,757.8	21,309.3	25,571.2	30,685.4
Other Receivables (Short-Term)	79.7	1,179.9	1,170.0	1,105.5	57.1	143.1	171.7	206.0	247.2	296.7
Bill/Notes Receivable	119.7	76.9	83.3	151.6	212.8	181.2	217.4	260.9	313.1	375.7
Prepayment/Advance	152.8	98.0	80.0	69.3	86.7	144.5	173.4	208.0	249.7	299.6
Trading Securities	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current Maturities Of Non-Current Assets	0.0	0.0	355.0	238.9	552.2	304.7	366.6	438.8	526.5	631.8
Total Current Assets	17,218.0	16,191.3	21,455.9	25,324.6	28,526.6	33,023.5	40,124.4	48,552.6	58,589.7	70,562.3
Construction In Progress-Net	2,064.6	2,002.2	1,526.1	544.7	234.4	281.3	337.6	405.1	486.1	583.3
Total Fixed Assets	5,345.4	6,362.2	6,968.9	7,970.0	8,249.6	8,823.2	9,582.6	10,560.4	11,795.7	13,336.0
Engineering Materials	5.8	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Deferred Income Tax Asset (Long-Term)	673.0	567.6	592.2	568.1	649.7	649.7	649.7	649.7	649.7	649.7
Goodwill	276.0	276.0	276.0	276.0	276.0	276.0	276.0	276.0	276.0	276.0
Other Noncurrent Assets	0.0	513.6	158.6	1,004.0	204.2	542.9	651.5	781.8	938.1	1,125.8
Investment Securities Available For Sale	0.0	1,125.1	1,158.7	1,458.1	3,460.3	3,460.3	3,460.3	3,460.3	3,460.3	3,460.3
Deferred Costs	6.7	5.9	5.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1
Net Equity Investments In Joint Ventures/Assoc	970.2	19.8	46.4	21.0	2.0	2.0	2.0	2.0	2.0	2.0
Intangible Assets Excluding Goodwill	1,658.8	1,692.9	1,671.6	1,634.6	1,653.5	1,572.6	1,495.6	1,422.4	1,352.7	1,286.5
Total Non-Current Assets	11,000.4	12,566.4	12,404.4	13,479.5	14,731.6	16,807.7	17,894.5	19,284.4	21,032.4	23,205.4
Total Assets	28,218.4	28,757.7	33,860.3	38,804.1	43,258.1	49,840.2	58,018.9	67,837.0	79,622.2	93,767.6
Liabilities and total shareholders' equity										
Accounts Payable - Trade	1,164.9	826.7	798.7	784.2	1,111.4	815.6	978.7	1,174.4	1,409.3	1,691.2
Notes Payable (Short-Term)	1,516.8	1,750.0	2,240.0	960.0	8.2	632.2	811.9	1,027.9	1,287.9	1,601.3
Short-Term Borrowings	951.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accrued Compensation/Postretirement Obligation	75.4	75.2	117.9	165.5	209.7	209.7	209.7	209.7	209.7	209.7
Interest Accrued/Payable	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends Accrued/Payable	4.7	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Customer Deposits/Advances (Short-Term)	893.2	899.6	1,260.8	3,847.5	4,199.8	5,039.8	6,047.8	7,257.3	8,708.8	10,450.6
Other Payables	4,522.2	4,046.8	4,724.6	4,867.6	5,620.0	6,867.3	8,240.7	9,888.9	11,866.7	14,240.0
Current Tax Liabilities	1,427.0	1,118.4	1,430.9	1,807.8	2,289.6	2,297.0	2,766.4	3,307.6	3,989.2	4,763.0
ST Borrowing - Prior Year	0.0	951.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividend Payable - Prior Year	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Total Current Liabilities	10,557.4	8,721.4	10,577.6	12,437.2	13,438.7	15,861.5	19,045.2	22,865.8	27,451.5	32,955.7
Long Term Debt	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Deferred Income Taxes (Liabilities)	47.0	33.9	20.9	18.5	18.0	18.0	18.0	18.0	18.0	18.0
Deferred/Unearned Revenue (Long-Term)	0.0	71.9	119.4	111.1	107.3	107.3	107.3	107.3	107.3	107.3
Other Noncurrent Liabilities	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Special Item With Partial Reserve Character	202.0	201.2	200.7	200.0	199.1	199.1	199.1	199.1	199.1	199.1
LT Borrowing - Prior Year	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Noncurrent Liabilities	264.3	307.3	341.2	329.7	324.6	48838.0	55016.7	64834.8	76620.0	90765.4
Total Liabilities	10,821.7	9,028.6	10,918.8	12,767.1	13,763.3	16,186.3	19,369.9	23,190.6	27,776.2	33,280.5
Stockholder Equity										
Minority/Non Controlling Int (Stockhldrs Edty)	7.7	4.4	4.4	-15.8	-20.2	-20.2	-20.2	-20.2	-20.2	-20.2
Treasury Stock (Amount)	-146.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accumulated Other Comprehensive Income	0.0	0.0	0.0	1.1	0.9	0.9	0.9	0.9	0.9	0.9
Retained Earnings (Accumulated Deficit)	14,589.0	16,936.0	19,934.9	23,049.4	26,511.9	30,671.0	35,666.0	41,663.5	48,863.0	57,504.2
Total Shareholders Equity	17,396.7	19,729.1	22,941.5	26,037.0	29,494.9	33,653.9	38,649.0	44,646.4	51,845.9	60,487.2
Cumulative Translation Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Reserve	1,326.5	1,172.3	741.7	741.7	741.7	741.7	741.7	741.7	741.7	741.7
Statutory And Discretionary Reserves	540.0	540.0	753.5	753.5	753.5	753.5	753.5	753.5	753.5	753.5
Total Share Capital	1,080.0	1,076.4	1,507.0	1,507.0	1,507.0	1,507.0	1,507.0	1,507.0	1,507.0	1,507.0
Total Shareholders Equity Excluding Minority	17,389.1	19,724.7	22,937.1	26,052.8	29,515.0	33,674.1	38,659.1	44,666.6	51,866.1	60,507.3
Total Liabilities and Shareholders Equity	28,218.4	28,757.7	33,860.3	38,804.1	43,258.1	49,840.2	58,018.9	67,837.0	79,622.2	93,767.6

Table 19: Common size Statement of Financial Position

Source: Statutory and author analysis

% of Total Assets	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Assets										
Cash and Equivalents	27.84%	15.12%	13.90%	6.33%	4.05%	3.13%	4.07%	4.77%	5.29%	5.66%
Accounts Receivable - Trade	0.08%	0.03%	0.02%	0.03%	0.02%	0.03%	0.03%	0.04%	0.04%	0.04%
Inventories	31.11%	35.11%	32.85%	31.50%	29.73%	31.87%	32.85%	33.71%	34.47%	35.12%
Other Current Assets	0.00%	5.03%	14.72%	25.94%	30.04%	29.69%	30.61%	31.41%	32.12%	32.72%
Other Receivables (Short-Term)	0.28%	0.41%	0.35%	0.28%	0.13%	0.29%	0.30%	0.30%	0.31%	0.32%
Bill/Notes Receivable	0.42%	0.27%	0.25%	0.39%	0.49%	0.36%	0.37%	0.38%	0.39%	0.40%
Prepayment/Advance	0.54%	0.34%	0.24%	0.18%	0.20%	0.29%	0.30%	0.31%	0.31%	0.32%
Trading Securities	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Current Maturities Of Non-Current Assets	0.00%	0.00%	1.05%	0.62%	1.28%	0.61%	0.63%	0.65%	0.66%	0.67%
Total Current Assets	61.02%	56.30%	63.37%	65.26%	65.94%	66.28%	69.16%	71.57%	73.58%	75.25%
Construction In Progress-Net	7.32%	6.96%	4.51%	1.40%	0.54%	0.56%	0.58%	0.60%	0.61%	0.62%
Total Fixed Assets	18.94%	22.12%	20.58%	20.54%	19.07%	17.70%	16.52%	15.57%	14.81%	14.22%
Engineering Materials	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred Income Tax Asset (Long-Term)	2.39%	1.97%	1.75%	1.46%	1.50%	1.30%	1.12%	0.96%	0.82%	0.69%
Goodwill	0.98%	0.96%	0.82%	0.71%	0.64%	0.55%	0.48%	0.41%	0.35%	0.29%
Other Noncurrent Assets	0.00%	1.79%	0.47%	2.59%	0.47%	1.09%	1.12%	1.15%	1.18%	1.20%
Investment Securities Available For Sale	0.00%	0.00%	3.42%	3.76%	8.00%	6.94%	5.96%	5.10%	4.35%	4.00%
Deferred Costs	0.02%	0.02%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Equity Investments In Joint Ventures/Assoc	3.44%	0.07%	0.14%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Intangible Assets Excluding Goodwill	5.88%	5.89%	4.94%	4.21%	3.82%	3.16%	2.58%	2.10%	1.70%	1.37%
Total Non-Current Assets	38.98%	43.70%	36.63%	34.74%	34.06%	33.72%	30.84%	28.43%	26.42%	24.75%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Liabilities and shareholders' equity										
Accounts Payable - Trade	4.13%	2.87%	2.36%	2.02%	2.57%	1.64%	1.69%	1.73%	1.77%	1.80%
Notes Payable (Short-Term)	5.38%	6.09%	6.62%	2.47%	0.02%	1.27%	1.40%	1.52%	1.62%	1.71%
Short-Term Borrowings	3.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accrued Compensation/Postretirement Obligation	0.27%	0.26%	0.35%	0.43%	0.48%	0.42%	0.36%	0.31%	0.26%	0.22%
Interest Accrued/Payable	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dividends Accrued/Payable	0.02%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer Deposits/Advances (Short-Term)	3.17%	3.13%	3.72%	9.92%	9.71%	10.11%	10.42%	10.70%	10.94%	11.15%
Other Payables	16.03%	14.07%	13.95%	12.54%	12.99%	13.78%	14.20%	14.58%	14.90%	15.19%
Current Tax Liabilities	5.06%	3.89%	4.23%	4.66%	5.29%	4.61%	4.75%	4.88%	4.99%	5.08%
ST Borrowing - Prior Year	0.00%	3.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dividend Payable - Prior Year	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Total Current Liabilities	37.41%	30.33%	31.24%	32.05%	31.07%	31.82%	32.83%	33.71%	34.48%	35.15%
Long Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred Income Taxes (Liabilities)	0.17%	0.12%	0.06%	0.05%	0.04%	0.04%	0.03%	0.03%	0.02%	0.02%
Deferred/Unearned Revenue (Long-Term)	0.00%	0.25%	0.35%	0.29%	0.25%	0.22%	0.19%	0.16%	0.13%	0.11%
Other Noncurrent Liabilities	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Special Item With Partial Reserve Character	0.72%	0.70%	0.59%	0.52%	0.46%	0.40%	0.34%	0.29%	0.25%	0.21%
LT Borrowing - Prior Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Noncurrent Liabilities	0.94%	1.07%	1.01%	0.85%	0.75%	0.65%	0.56%	0.48%	0.41%	0.35%
Total Liabilities	38.35%	31.40%	32.25%	32.90%	31.82%	32.48%	33.39%	34.19%	34.89%	35.49%
Stockholder Equity										
Minority/Non Controlling Int (Stockhldr Eqty)	0.03%	0.02%	0.01%	-0.04%	-0.05%	-0.04%	-0.03%	-0.03%	-0.03%	-0.02%
Treasury Stock (Amount)	-0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accumulated Other Comprehensive Income	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retained Earnings (Accumulated Deficit)	51.70%	58.89%	58.87%	59.40%	61.29%	61.54%	61.47%	61.42%	61.37%	61.33%
Total Shareholders Equity	61.65%	68.60%	67.75%	67.10%	68.18%	67.52%	66.61%	65.81%	65.11%	64.51%
Cumulative Translation Adjustment	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Reserve	4.70%	4.08%	2.19%	1.91%	1.71%	1.49%	1.28%	1.09%	0.93%	0.79%
Statutory And Discretionary Reserves	1.91%	1.88%	2.23%	1.94%	1.74%	1.51%	1.30%	1.11%	0.95%	0.80%
Total Share Capital	3.83%	3.74%	4.45%	3.88%	3.48%	3.02%	2.60%	2.22%	1.89%	1.61%
Total Shareholders Equity Excluding Minority	61.62%	68.59%	67.74%	67.14%	68.23%	67.56%	66.65%	65.84%	65.14%	64.53%
Total Liabilities and Shareholders Equity	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 20: Assumption Statement of Financial Position

Source: Statutory reports and author analysis

	Unit	2018F	2019F	2020F	2021F	2022F	Description
Assets							
Accounts Receivable - Trade	%	0.07%	0.07%	0.07%	0.07%	0.07%	Based on a 5 year historical average as a percentage of revenue.
Inventories	%	66.45%	66.45%	66.45%	66.45%	66.45%	Based on a 5 year historical average as a percentage of revenue.
Other Current Assets	%	61.91%	61.91%	61.91%	61.91%	61.91%	Based on a 2 year historical average as a percentage of revenue.
Other Receivables (Short-Term)	%	0.60%	0.60%	0.60%	0.60%	0.60%	Based on a 5 year historical average as a percentage of revenue.
Bill/Notes Receivable	%	0.76%	0.76%	0.76%	0.76%	0.76%	Based on a 5 year historical average as a percentage of revenue.
Prepayment/Advance	%	0.60%	0.60%	0.60%	0.60%	0.60%	Based on a 5 year historical average as a percentage of revenue.
Trading Securities	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Current Maturities Of Non-Current Assets	%	1.27%	1.27%	1.27%	1.27%	1.27%	Based on a 5 year historical average as a percentage of revenue.
Non-current assets							
Construction In Progress-Net	%	20.00%	20.00%	20.00%	20.00%	20.00%	Since 2017, it will grow 20% annually compared to last year.
Capex	%	20.00%	20.00%	20.00%	20.00%	20.00%	Based on a 5 year historical average, add 20% from 2019 to 2022.
Engineering Materials	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Deferred Income Tax Asset (Long-Term)	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Goodwill	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Other Noncurrent Assets	%	2.27%	2.27%	2.27%	2.27%	2.27%	Based on a 5 year historical average as a percentage of revenue.
Investment Securities Available For Sale	%	8.15%	8.15%	8.15%	8.15%	8.15%	Based on a 5 year historical average as a percentage of revenue.
Deferred Costs	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Net Equity Investments In Joint Ventures/Assoc	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Liabilities and total shareholders' equity							
Current Liabilities							
Accounts Payable - Trade	%	3.41%	3.41%	3.41%	3.41%	3.41%	Based on a 5 year historical average as a percentage of revenue.
Short-Term Borrowings	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Accrued Compensation/Postretirement Obligation	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Interest Accrued/Payable	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Dividends Accrued/Payable	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Customer Deposits/Advances (Short-Term)	%	12.68%	12.68%	12.68%	12.68%	12.68%	Based on a 5 year historical average as a percentage of revenue.
Other Payables	%	28.73%	28.73%	28.73%	28.73%	28.73%	Based on a 5 year historical average as a percentage of revenue.
Current Tax Liabilities	%	9.61%	9.61%	9.61%	9.61%	9.61%	Based on a 5 year historical average as a percentage of revenue.
ST Borrowing - Prior Year	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Dividend Payable - Prior Year	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Non Current Liabilities							
Long Term Debt	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Deferred Income Taxes (Liabilities)	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Deferred/Unearned Revenue (Long-Term)	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Other Noncurrent Liabilities	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Special Item With Partial Reserve Character	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
LT Borrowing - Prior Year	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Stockholder Equity							
Minority/Non Controlling Int (Stckhldrs Eqty)	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Treasury Stock (Amount)	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Accumulated Other Comprehensive Income	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Total Shareholders Equity							
Cumulative Translation Adjustment	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Total Reserve	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Statutory And Discretionary Reserves	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.
Total Share Capital	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017 nominal value.

Table 21: Income Statement

Source: Statutory reports and author analysis

In Millions of CNY except Per Share	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	15,023.6	14,672.2	16,052.4	17,183.1	19,917.9	23,901.5	28,681.8	34,418.2	41,301.8	49,662.2
Cost of Goods Sold	5,945.7	5,777.4	6,115.1	6,203.0	6,681.1	8,924.3	10,709.2	12,851.0	15,421.2	18,505.5
Gross profit	9,077.9	8,894.8	9,937.4	10,980.1	13,236.8	14,977.2	17,972.7	21,567.2	25,880.6	31,056.7
Sales Tax	187.3	190.4	229.4	309.6	1,151.9	552.5	663.0	795.6	954.7	1,145.6
Sales/Marketing/Advertising Expenses	1,387.7	1,679.8	1,887.4	1,869.0	2,387.4	2,642.4	3,170.8	3,805.0	4,566.0	5,479.2
(Gain)/Loss On Sale of Assets	0.0	0.0	0.0	5.8	8.6	0.0	0.0	0.0	0.0	0.0
General and Administrative Expenses	1,037.4	1,267.1	1,447.9	1,582.4	1,532.1	1,982.0	2,378.4	2,854.1	3,424.9	4,109.9
SG&A	2,425.1	2,946.9	3,330.3	3,451.4	3,919.6	4,624.4	5,549.3	6,659.1	7,990.9	9,589.1
Impairment (Operating)	7.8	37.8	11.9	48.0	22.9	37.2	44.6	53.5	64.2	77.1
Total Investment Income	51.4	53.0	577.9	547.2	624.0	507.7	609.3	731.1	877.3	1,052.8
Total Operating Expenses	8,369.4	8,715.7	9,490.3	10,003.0	11,741.6	13,929.6	16,715.5	20,058.7	24,070.4	28,884.5
Operating Income	6,705.6	6,009.5	7,140.1	7,721.5	8,836.5	10,479.6	12,575.5	15,090.7	18,108.8	21,730.5
EBITDA	7,288.7	6,887.9	8,077.3	8,521.5	9,586.5	11,678.7	13,934.2	16,645.6	19,903.7	23,817.5
Depreciation	271.1	446.6	527.5	629.7	644.6	624.3	678.0	747.2	834.6	943.6
Amortization	85.0	89.8	91.3	95.6	45.2	45.2	45.2	45.2	45.2	45.2
EBIT	6,932.5	6,351.4	7,458.5	7,796.2	8,896.7	11,009.2	13,211.1	15,853.3	19,023.9	22,828.7
Other Non-Operating Income	18.6	45.3	36.3	45.1	19.8	48.8	58.6	70.3	84.3	101.2
Other Non-Operating Expenses	38.3	24.1	11.0	5.6	8.3	26.9	32.3	38.8	46.5	55.8
Interest Income	-265.0	-326.2	-293.2	-35.9	-48.8	-43.5	-65.7	-90.1	-117.2	-147.8
Interest Expense	18.3	5.5	0.0	0.7	0.0	0.3	0.4	0.5	0.6	0.8
Income Before Income Taxes	6,685.9	6,030.7	7,165.3	7,761.0	8,848.0	11,052.4	13,276.4	15,942.9	19,140.6	22,975.8
Income Tax Expense (Benefit)	1,683.7	1,522.7	1,800.1	1,956.0	2,229.2	2,784.2	3,344.4	4,016.1	4,821.6	5,787.7
Net Income	5,002.2	4,508.0	5,365.2	5,804.9	6,618.8	8,268.3	9,932.0	11,926.8	14,319.0	17,188.1
Minority/Non Controlling Interest	0.1	0.5	0.0	-22.2	-8.4	-8.4	-8.4	-8.4	-8.4	-8.4
Basic EPS	4.6	4.2	3.6	3.9	4.4	5.5	6.6	7.9	9.5	11.4
Diluted EPS	4.6	4.2	3.6	3.9	4.4	5.5	6.6	7.9	9.5	11.4
Net Income for Common Shareholders	5,002.1	4,507.5	5,365.2	5,827.2	6,627.2	8,276.7	9,940.4	11,935.2	14,327.4	17,196.5

Table 22: Common size Income Statement

Source: Statutory reports and author analysis

In Millions of CNY except Per Share	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Goods Sold	39.58%	39.38%	38.09%	36.10%	33.54%	37.34%	37.34%	37.34%	37.34%	37.34%
Sales Tax	60.42%	60.62%	61.91%	63.90%	66.46%	62.66%	62.66%	62.66%	62.66%	62.66%
Sales/Marketing/Advertising Expenses	1.25%	1.30%	1.43%	1.80%	5.78%	2.31%	2.31%	2.31%	2.31%	2.31%
(Gain)/Loss On Sale of Assets	9.24%	11.45%	11.73%	10.88%	11.99%	11.06%	11.06%	11.06%	11.06%	11.06%
SG&A	6.91%	8.64%	9.02%	9.21%	7.69%	8.29%	8.29%	8.29%	8.29%	8.29%
Impairment (Operating)	0.05%	0.26%	0.07%	0.28%	0.11%	0.16%	0.16%	0.16%	0.16%	0.16%
Total Investment Income	0.34%	0.36%	3.60%	3.18%	3.13%	2.12%	2.12%	2.12%	2.12%	2.12%
Total Operating Income	55.71%	59.40%	59.12%	58.21%	58.95%	58.28%	58.28%	58.28%	58.28%	58.28%
Operating Expenses	44.63%	40.96%	44.48%	44.94%	44.36%	43.84%	43.84%	43.84%	43.84%	43.84%
EBITDA	48.51%	46.95%	50.32%	49.59%	48.13%	48.86%	48.58%	48.36%	48.19%	48.06%
Depreciation	1.80%	3.04%	3.29%	3.66%	3.24%	2.61%	2.36%	2.17%	2.02%	1.90%
Amortization	0.57%	0.61%	0.57%	0.56%	0.23%	0.19%	0.16%	0.13%	0.11%	0.09%
EBIT	46.14%	43.29%	46.46%	45.37%	44.67%	46.06%	46.06%	46.06%	46.06%	46.06%
Other Non-Operating Income	0.12%	0.31%	0.23%	0.26%	0.10%	0.20%	0.20%	0.20%	0.20%	0.20%
Other Non-Operating Expenses	0.26%	0.16%	0.07%	0.03%	0.04%	0.11%	0.11%	0.11%	0.11%	0.11%
Interest Income	-1.76%	-2.22%	-1.83%	-0.21%	-0.24%	-0.18%	-0.23%	-0.26%	-0.28%	-0.30%
Interest Expense	0.12%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial Income and expense	-1.64%	-2.19%	-1.83%	-0.20%	-0.24%	-0.18%	-0.23%	-0.26%	-0.28%	-0.30%
Income Before Income Taxes	44.50%	41.10%	44.64%	45.17%	44.42%	46.24%	46.29%	46.32%	46.34%	46.36%
Income Tax Expense (Benefit)	11.21%	10.38%	11.21%	11.38%	11.19%	11.65%	11.66%	11.67%	11.67%	11.68%
Net Income	33.30%	30.73%	33.42%	33.78%	33.23%	34.59%	34.63%	34.65%	34.67%	34.68%
Minority/Non Controlling Interest	0.00%	0.00%	0.00%	-0.13%	-0.04%	-0.04%	-0.03%	-0.02%	-0.02%	-0.02%
Basic EPS	0.03%	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Diluted EPS	0.03%	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Net Income for Common Shareholders	33.29%	30.72%	33.42%	33.91%	33.27%	34.63%	34.66%	34.68%	34.69%	34.70%

Table 23: Income Statement Assumption

Source: Statutory reports and author analysis

	Unit	2018F	2019F	2020F	2021F	2022F	Description
Revenues	%	20.00%	20.00%	20.00%	20.00%	20.00%	According to historical revenue and Yanghe's strategy, I assumed that the revenue's growth rate is 20%.
Cost of Goods Sold	%	37.34%	37.34%	37.34%	37.34%	37.34%	
Sales Tax	%	2.31%	2.31%	2.31%	2.31%	2.31%	
Sales/Marketing/Advertising Expenses	%	11.06%	11.06%	11.06%	11.06%	11.06%	
General and Administrative Expenses	%	8.29%	8.29%	8.29%	8.29%	8.29%	
Impairment (Operating)	%	0.16%	0.16%	0.16%	0.16%	0.16%	
Total Investment Income	%	2.12%	2.12%	2.12%	2.12%	2.12%	
Total Operating Expenses	%	58.28%	58.28%	58.28%	58.28%	58.28%	
Depreciation	%	7.08%	7.08%	7.08%	7.08%	7.08%	
Amortization	%	4.90%	4.90%	4.90%	4.90%	4.90%	
Other Non-Operating Income	%	0.20%	0.20%	0.20%	0.20%	0.20%	
Other Non-Operating Expenses	%	0.11%	0.11%	0.11%	0.11%	0.11%	
Interest Income	%	-2.79%	-2.79%	-2.79%	-2.79%	-2.79%	
Interest Expense	%	0.05%	0.05%	0.05%	0.05%	0.05%	
Income Tax Expense (Benefit)	%	25.19%	25.19%	25.19%	25.19%	25.19%	
Minority/Non Controlling Interest	Yuan	(8.38)	(8.38)	(8.38)	(8.38)	(8.38)	

Table 24: Cash flow Statement

Source: Statutory reports and author analysis

In Millions of CNY	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
OPERATING ACTIVITIES					
EBITDA	11,678.7	13,934.2	16,645.6	19,903.7	23,817.5
INCOME TAX	2,784.2	3,344.4	4,016.1	4,821.6	5,787.7
ΔNWC	3,144.1	3,229.2	3,875.1	4,650.1	5,580.1
Total Cash Flow from Operations	5,750.4	7,360.6	8,754.5	10,432.0	12,449.7
INVESTING ACTIVITIES					
CAPEX	1,197.9	1,437.5	1,724.9	2,069.9	2,483.9
Total Cash Flows From Investing	1,197.9	1,437.5	1,724.9	2,069.9	2,483.9
FINANCING ACTIVITIES					
Interest	0.3	0.4	0.5	0.6	0.8
Dividend	4,117.6	4,945.4	5,937.8	7,127.9	8,555.2
ΔDebt	624.0	179.7	215.9	260.0	313.5
Total Cash Flows From financing	4,742.0	5,125.4	6,154.2	7,388.5	8,869.4
Net cash flow	-189.4	797.7	875.3	973.6	1,096.3
Begin cash flow	1,751.5	1,562.0	2,359.7	3,235.1	4,208.7
End cash flow	1,562.0	2,359.7	3,235.1	4,208.7	5,305.0

Table 25: CAPEX and D&A

Source: Statutory reports and author analysis

Capex and D&A	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Capex	1197.9	1437.5	1724.9	2069.9	2483.9
D&A					
Tangible fixed assets	624.3	678.0	747.2	834.6	943.6
Intangible assets	81.0	77.0	73.2	69.6	66.2

Table 26: Net working capital

Source: Statutory reports and author analysis

NWC	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Current Assets	9153.2	11844.4	16393.1	22629.0	26222.9	31165.8	37399.0	44878.8	53854.5	64625.5
Accounts Receivable - Trade	21.7	9.3	6.5	10.8	8.5	16.9	20.3	24.4	29.2	35.1
Inventories	8779.3	10097.0	11122.4	12221.5	12861.5	15882.0	19058.4	22870.1	27444.2	32933.0
Other Current Assets	0.0	1445.3	4983.9	10065.2	12996.4	14798.1	17757.8	21309.3	25571.2	30685.4
Other Receivables (Short-Term)	79.7	117.9	117.0	110.5	57.1	143.1	171.7	206.0	247.2	296.7
Bill/Notes Receivable	119.7	76.9	83.3	151.6	212.8	181.2	217.4	260.9	313.1	375.7
Prepayment/Advance	152.8	98.0	80.0	69.3	86.7	144.5	173.4	208.0	249.7	299.6
Current Liabilities	8094.3	7927.1	8342.3	11482.0	13435.2	15234.0	18237.9	21842.7	26168.3	31359.1
Accounts Payable - Trade	1164.9	826.7	798.7	784.2	1111.4	815.6	978.7	1174.4	1409.3	1691.2
Customer Deposits/Advances (Short-Term)	893.2	899.6	1260.8	3847.5	4199.8	5039.8	6047.8	7257.3	8708.8	10450.6
Other Payables	4522.2	4046.8	4724.6	4867.6	5620.0	6867.3	8240.7	9888.9	11866.7	14240.0
Current Tax Liabilities	1427.0	1118.4	1430.9	1807.8	2289.6	2297.0	2756.4	3307.6	3969.2	4763.0
Accrued Compensation/Postretirement Obligation	75.4	75.2	117.9	165.5	209.7	209.7	209.7	209.7	209.7	209.7
Interest Accrued/Payable	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends Accrued/Payable	4.7	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0
ST Borrowing - Prior Year	0.0	951.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividend Payable - Prior Year	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
NWC	1058.9	3917.3	8050.7	11147.0	12787.7	15931.8	19161.0	23036.1	27686.2	33266.3
DNWC		2858.4	4133.4	3096.3	1640.7	3144.1	3229.2	3875.1	4650.1	5580.1

Table 27: Key ratios

Source: Statutory reports and author analysis

PROFITABILITY RATIOS	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Gross Profit Margin	60.4%	60.6%	61.9%	63.9%	66.5%	62.7%	62.7%	62.7%	62.7%	62.7%
EBITDA Margin	48.5%	46.9%	50.3%	49.6%	48.1%	48.9%	48.6%	48.4%	48.2%	48.1%
EBIT Margin	46.1%	43.3%	46.5%	45.4%	44.7%	46.1%	46.1%	46.1%	46.1%	46.1%
Net Profit Margin	33.3%	30.7%	33.4%	33.9%	33.3%	34.6%	34.7%	34.7%	34.7%	34.7%
ROA	19.3%	15.8%	17.1%	16.0%	16.1%	17.8%	18.4%	19.0%	19.4%	19.8%
ROE	29.1%	24.3%	25.2%	23.8%	23.9%	26.2%	27.5%	28.6%	29.7%	30.6%
EFFICIENCY RATIOS										
Receivable turnover	389.94	945.98	2041.38	1988.82	2063.01	1882.28	1541.86	1541.86	1541.86	1541.86
Days Sales Outstanding (DSO)	0.92	0.39	0.18	0.18	0.17	0.19	0.23	0.23	0.23	0.23
Inventory turnover	0.81	0.61	0.58	0.53	0.53	0.62	0.61	0.61	0.61	0.61
Days Inventory Outstanding (DIO)	451.29	596.27	633.28	686.81	685.16	587.80	595.44	595.44	595.44	595.44
Payables turnover	6.21	0.61	8.79	9.23	7.72	12.40	15.48	15.48	15.48	15.48
Days payable outstanding (DPO)	58.78	596.27	41.54	39.56	47.25	29.44	23.58	23.58	23.58	23.58
Cash cycle conversion (CCC)	393.43	0.39	591.91	647.43	638.08	558.55	572.09	572.09	572.09	572.09
Fixed asset turnover	3.55	2.51	2.41	2.30	2.46	2.80	3.12	3.42	3.69	3.94
Total asset turnover	0.58	0.52	0.51	0.47	0.49	0.51	0.53	0.55	0.56	0.57
LIQUIDITY RATIOS										
Current Ratio (x)	1.63	1.86	2.03	2.04	2.12	2.08	2.11	2.12	2.13	2.14
Quick Ratio (x)	0.80	0.70	0.98	1.05	1.17	1.08	1.11	1.12	1.13	1.14
Cash Ratio (x)	0.74	0.50	0.45	0.20	0.13	0.10	0.12	0.14	0.15	0.16
CAPITAL STRUCTURE										
Total Debt to Total Equity	0.14	0.09	0.10	0.04	0.00	0.0	0.02	0.02	0.02	0.03
Total Debt to Total Capital	0.12	0.08	0.09	0.04	0.00	0.02	0.02	0.02	0.02	0.03
Total Debt to Total Assets	0.09	0.06	0.07	0.02	0.00	0.01	0.01	0.02	0.02	0.02
Long-Term Debt to Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Long-Term Debt to Total Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Long-Term Debt to Assets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 28: DCF Analysis

Source: Statutory reports and author analysis

	2017F	2018F	2019F	2020F	2021F	2022F	Terminal
COST OF EQUITY							
RFR (risk free rate)	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%
CRP (country risk premium)	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%
MRP (market risk premium)	5.89%	5.89%	5.89%	5.89%	5.89%	5.89%	5.89%
β	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Cost of equity	8.83%	8.83%	8.83%	8.83%	8.83%	8.83%	8.83%
COST OF DEBT							
Cost of debt	0.0%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
Marginal tax rate	25.2%	25.19%	25.19%	25.19%	25.19%	25.19%	25.19%
After-tax cost of debt	0.0%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
WACC							
Weight of equity	99.97%	98.16%	97.94%	97.75%	97.58%	97.42%	97.42%
Weight of debt	0.03%	1.84%	2.06%	2.25%	2.42%	2.58%	2.58%
WACC	8.83%	8.67%	8.65%	8.64%	8.62%	8.61%	8.61%

In Millions of CNY	2017F	2018F	2019F	2020F	2021F	2022F	Terminal
EBIT(1-marginal tax rate)	6,655.6	11,009.2	13,211.1	15,853.3	19,023.9	22,828.7	22,828.7
D&A	689.8	669.4	723.2	792.3	879.7	988.7	988.7
Net increase in NWC	1,640.7	3,144.1	3,229.2	3,875.1	4,650.1	5,580.1	5,580.1
CAPEX	325.3	1,197.9	1,437.5	1,724.9	2,069.9	2,483.9	2,483.9
FCFF	5,379	7,336.7	9,267.5	11,045.6	13,183.7	15,753.4	15,753.4

Enterprise Value	
Terminal growth rate	2.00%
Perpetuity WACC	8.61%
Terminal value	243,202.3
PV of terminal value	174,797.6
NPV of FCFF	39,498.5
Enterprise value	214,296.2
Net debt	624.0
Value of equity	213,672.1
No. of shares outstanding	1,507.0
Equity value per share	141.8
Price at 26/09/2018	121.9
Potential	16.31%

Table 29: Jiangsu Yanghe Valuation through Multiples

Source: Statutory reports and author analysis

Company Name	Shuijingfang	Wuliangye	Moutai	Shanxifenjiu	Jiugujiu	Average	Median
P/E ratio FY18	31.10	20.30	25.11	26.33	24.81	25.53	25.11
P/B ratio FY18	10.05	4.18	7.86	6.31	3.08	6.30	6.31
P/Sales ratio FY18	6.45	6.70	11.59	4.59	5.25	6.92	6.45
EV/EBITDA FY18	22.43	12.68	16.55	17.42	14.11	16.64	16.55

Company Name	Yanghe
P/E FY18	25.82
P/Book FY18	6.35
P/Sales FY18	8.94
EV/EBITDA FY18	18.21

Price Target	141.8
P/E industry average	25.5
EPS	5.5
Fair price	140.2

Price Target	141.8
EV/EBITDA industry average	16.6
EBITDA	11678.7
EV	194324.9
Fair price	128.5

Fair Value	Potential	Current price	Overvalued
134.4	10.23%	121.9	5.52%

Table 30: Jiangsu Yanghe's DuPont Identity

Source: Statutory reports and author analysis

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Net Income	5002.1	4507.5	5365.2	5827.2	6627.2	8276.7	9940.4	11935.2	14327.4	17196.5
Revenue	15023.6	14672.2	16052.4	17183.1	19917.9	23901.5	28681.8	34418.2	41301.8	49562.2
Net profit margin	33.29%	30.72%	33.42%	33.91%	33.27%	34.63%	34.66%	34.68%	34.69%	34.70%
Total Revenue	15023.6	14672.2	16052.4	17183.1	19917.9	23901.5	28681.8	34418.2	41301.8	49562.2
Average TA	27473.7	28488.1	31309.0	36332.2	41031.1	46549.2	53929.5	62927.9	73729.6	86694.9
Asset turnover	0.55	0.52	0.51	0.47	0.49	0.51	0.53	0.55	0.56	0.57
Average TA	27473.7	28488.1	31309.0	36332.2	41031.1	46549.2	53929.5	62927.9	73729.6	86694.9
Average TSE	17183.6	18556.9	21330.9	24494.9	27783.9	31594.6	36171.6	41667.9	48266.3	56186.7
Equity Multiplier	1.60	1.54	1.47	1.48	1.48	1.47	1.49	1.51	1.53	1.54
ROE	29.11%	24.29%	25.15%	23.79%	23.85%	26.20%	27.48%	28.64%	29.68%	30.61%
3-Step ROE	29.11%	24.29%	25.15%	23.79%	23.85%	26.20%	27.48%	28.64%	29.68%	30.61%
ROCE	39.25%	31.70%	32.03%	29.57%	29.84%	32.40%	33.90%	35.25%	36.46%	37.54%

Table 31: Jiangsu Yanghe liquor quality and craft awards summary

Source: Statutory reports, baidu, and author

1979	Yanghe Daqu won the title of “China Famous Wine” and ranked among the top eight famous wines in the country. The 53-degree Shuanggou Daqu and the 39-degree Shuanggou Special Liquid were also rated as National Quality Wines.
1984	The 55-degree Yanghe Daqu has won the title of “China Famous Wine” and won the National Quality Prize Card. The 38-degree Yanghe Daqu won the National Quality Award Silver Medal; the 53-degree Shuanggou Daqu was awarded the “Chinese Famous Wine” and won the Gold Award, 39 Degree Shuanggou The liquid won the silver prize
1990	In the national Luzhou-flavor liquor competition held by the Ministry of Light Industry, Yanghe Daqu was designated as a benchmark wine.
1992	Yanghe Daqu won the International Gold Award in the United States
1995	Yanghe passed ISO9002 quality certification, Yanghe Daqu passed the national square mark certification; 53 degree Shuanggou daqu, 46 degree Shuanggou daqu won the US "Florida Golden Sailing Award"
2009	"Yanghe wine traditional brewing skills" and "Shuanggou Daqu wine traditional brewing skills" were selected into the provincial non-legacy list
2012	Dream Blue and Mian Sue Su were awarded the “Body Design Award” and the “Sensory Quality Award”.
2014	The soft wine is certified by the Nanjing Guohuan Organic Product Certification Center (OFDC) and has obtained the “Organic Product” certification. It is officially among the ranks of organic liquor.
2014	The “New Technology and Application of Solid-state Fermented Liquor Production Based on Flavor-Oriented”, which was jointly completed by Yanghe and Jiangnan University, won the second prize of National Science and Technology Invention Award.
2014	Appraised by Jiangsu Food Industry Association, 52 degrees 5A Sky Blue, 42 degree soft Shuanggou daqu (Gold) and 52 degrees 5A Sea Blue, 52 degree ecological su wine (Dijin) were awarded the quality of 2014 liquor sensory evaluation Gold award.
2015	The 52-degree “Dream Blue” product won the title of “2015 China Liquor Sensory Quality Award”, “5A Grade Su Wine” and “Shuanggou 1955 Gold Label” won the title of “2015 China Liquor Design Award”
2016	The company's "research and application of bioactive substances in brewing environment", "product development and technology development of Shuanggouyu Sake" and other three scientific and technological achievements have passed national appraisal, and the results are leading domestically.
2016	“Yanghe Micro Molecular Wine • Weike” won the “Golden Point Design Award” in Taiwan
2017	In the fourth quarter of 2016, the “China Liquor Brand Word of Mouth Research Report” initiated by the authority of the China Statistical Information Service Center (CSISC), Yanghe won the “Product Appreciation First” and “Quality Recognition First”. "Brand health First."
2017	The company's "biological functional music preparation method" and other two core science and technology won the national invention patent and "soft and ecological ecological mud production method" won the national invention patent authorization.

Figure 33: Jiangsu Yanghe 1+1 marketing model

Source: Statutory reports and author analysis

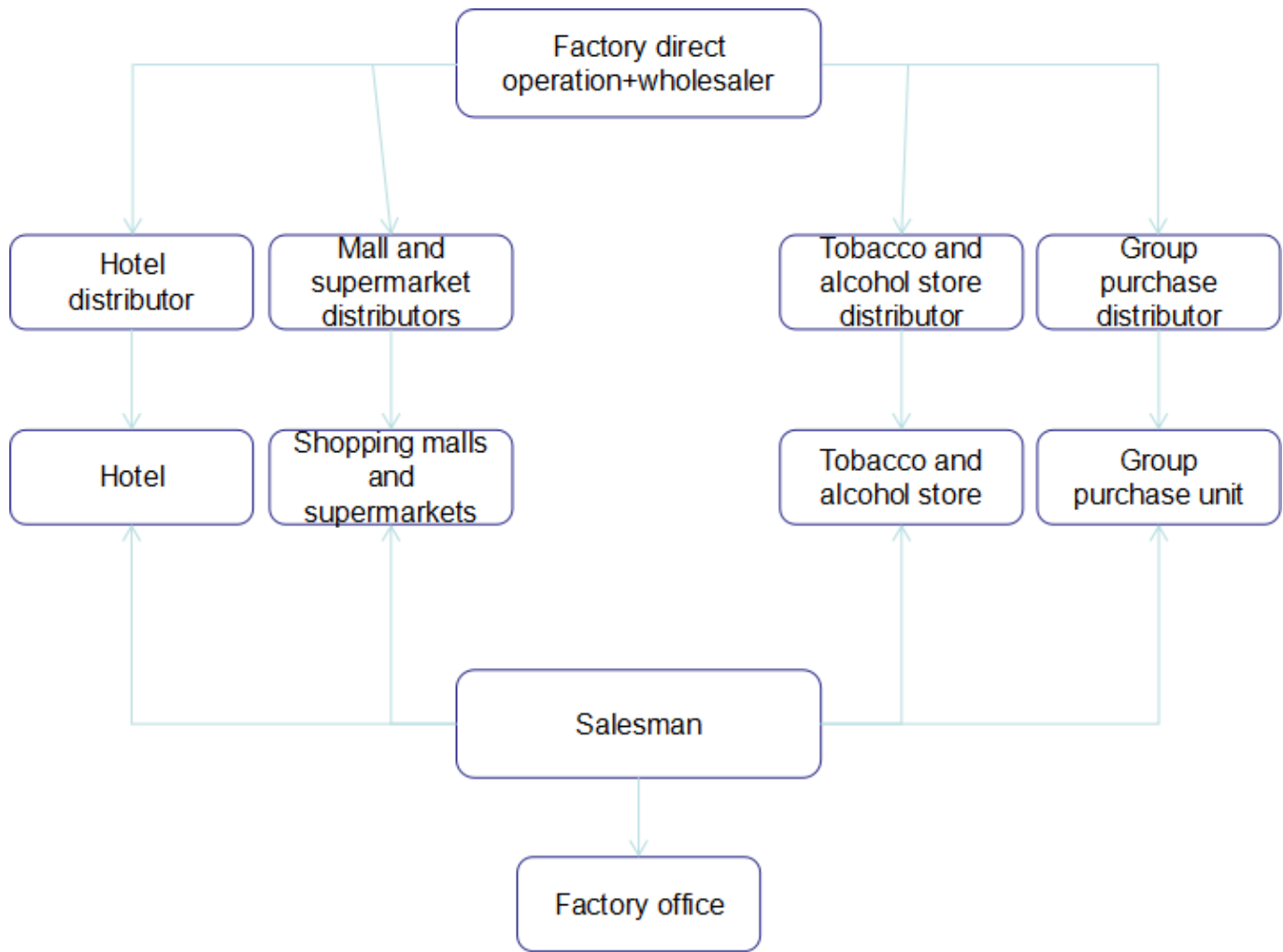


Figure 34: Jiangsu Yanghe 4*3 marketing model

Source: Statutory reports and author analysis



Figure 35: Jiangsu Yanghe's organizational chart

Source: Statutory reports

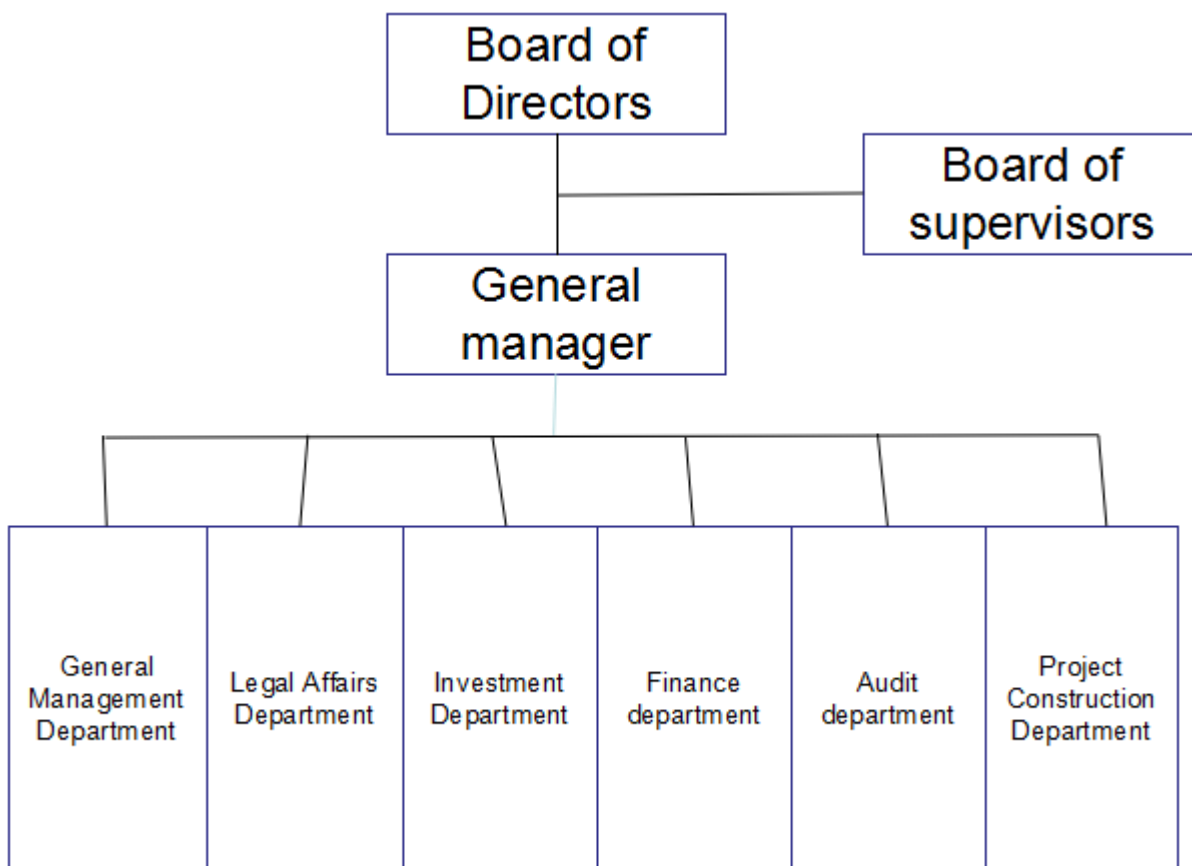


Figure 36: Jiangsu Yanghe strategic advantage

Source: Statutory reports and author analysis



Figure 37: Jiangsu Yanghe restructuring process

Source: Statutory reports and author analysis

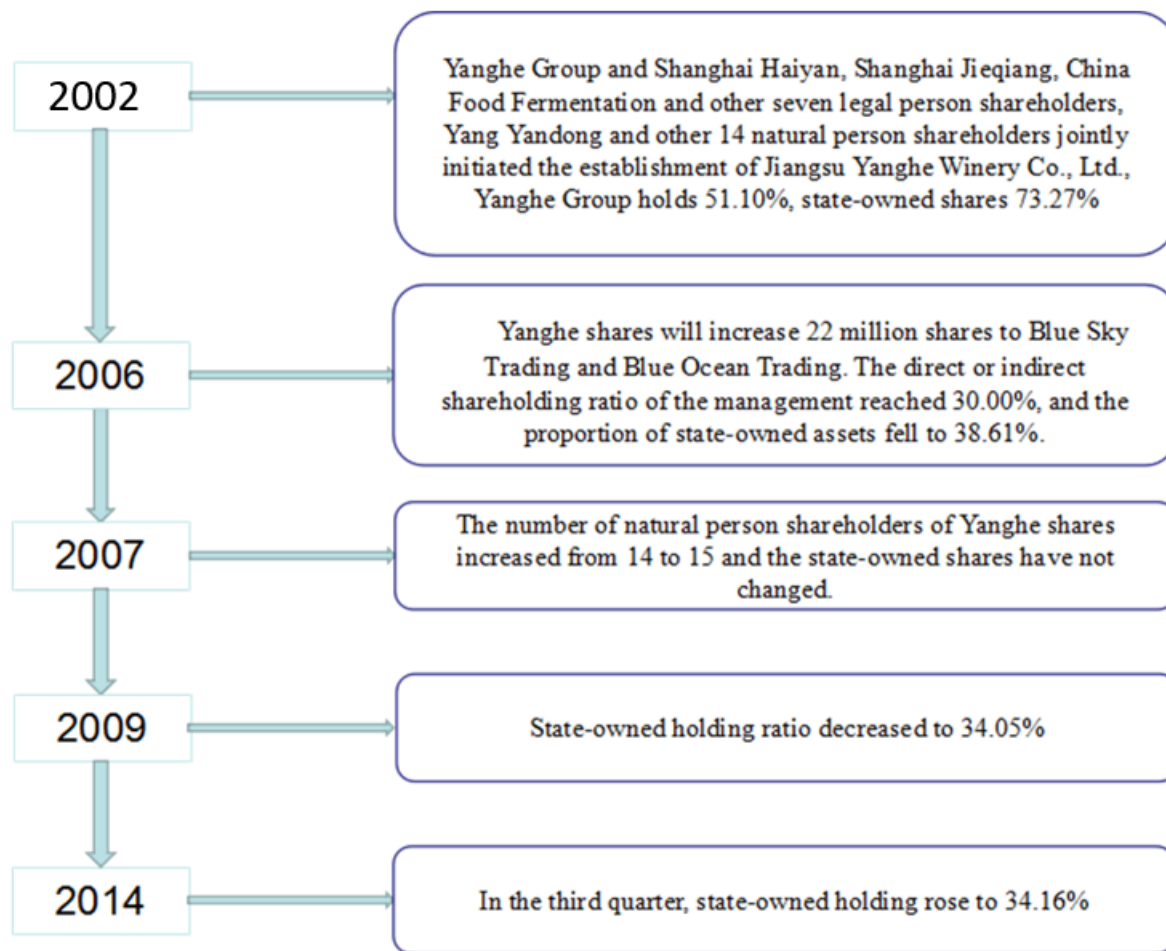


Figure 38: Jiangsu Yanghe main liquor products

Source: company presentation

Product	Price	Product Positioning	Product Image	Main competitive brand
M9	1289 yuan	Ultra high end		Moutai, Wuliangye, Guojiao1573
Manual version	1688 yuan	Ultra high end		Moutai, Wuliangye, Guojiao1573
M6	689 yuan	High end		Jiannanchun, Shihede, Jingtai
M3	489 yuan	Sub-high end		Jiannanchun, Shihede, Jingtai
M1	358 yuan	Sub-high end		Jiannanchun, 20 year-Qinghua
Sky blue	359 yuan	Sub-high end		Zhenniang N8, Honghualing N10
Sea blue	149 yuan	Middle end		Kouzijiao, Zhu yeqing

References

- Alford, A. W. (1992), The effect of the set of comparable firms on the accuracy of the price-earnings valuation method. *Journal of Accounting Research*, 30 (1), 94-108.
- Baker, M. R. and Ruback, R. (1999), Estimating industry multiples. Working Paper, Harvard Business School, Boston.
- Benninga, S. Z. and Sarig, O. H. (1997), *Corporate Finance: A Valuation Approach*. 1st edition, McGraw-Hill.
- Benninga, S. Z. (2008), *Financial Modelling*. 3rd edition, Massachusetts Institute of Technology.
- Bhojraj, S., and Lee, C. M. C. (2002), Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms. *Journal of Accounting Research*, 40 (2), 407-439.
- Damodaran, A. (1994), *Damodaran on valuation: Security analysis for investment and corporate finance*. 1st edition, John Wiley & Sons.
- Damodaran, A. (1997), *Corporate Finance - Theory and practice*. 1st edition, John Wiley & Sons.
- Damodaran, A. (1999), Estimating Risk Parameters. Working Paper, Stern School of Business.
- Damodaran, A. (2008), Equity Risk Premiums (ERP): Determinants, Estimation and Implications. Working Paper, Stern School of Business.
- Damodaran, A. (2012), *Investment Valuation: Tools and Techniques for determining the value of any asset*. 3rd edition, John Wiley & Sons.
- Defusco, R. A., Mcleavey, D. W. and Pinto, J. E. (2007), *Quantitative Investment Analysis*. CFA Institute Investment Series, 2nd edition, John Wiley & Sons.
- Emis, Demographic and Geopolitical Indicators Database.
- Fama, E. F., and French, K. R. (1997), Industry costs of equity. *Journal of Financial Economics*, 43 (2), 153-193.
- Factiva, Company, Industry, Business News Database.
- Jain, C. L. (2003), Business Forecasting Practices in 2003. *The Journal of Business Forecasting Methods & Systems*, 23 (3), 2-6.
- Kaplan, S. N. and Ruback, R. S. (1995), The valuation of cash flow forecasts: An empirical analysis. *Journal of Finance*, 50 (4), 1059–1093.
- Koller, T., Goedhart, M. and Wessels, D. (2010), *Valuation, Measuring and Managing the Value of Companies*. 5th edition, McKinsey & Company.
- Koeplin, J., Sarin, A. and Shapiro, A. C. (2000), The private company discount. *Journal of Applied Corporate Finance*, 12 (4), 94-101.
- KPMG (2015), *Corporate Income Tax Reform*. Report.
- Liu, J., Nissim, D. and Thomas, J. (2002), Equity Valuation Using Multiples. *Journal of Accounting Research*, 40 (1), 135-172.
- Liu, J., Nissim, D. and Thomas, J. (2004), Price multiples based on forecasts and reported values of earnings, dividends, sales, and cash flows: An international analysis. Working Paper, Yale University.
- Pinto, J. E., Henry, E., Robinson, T. R. and Stowe, J.D. (2010), *Equity Asset Valuation*. CFA Institute Investment Series, 2nd edition, John Wiley & Sons.
- Piotroski, J. (2000), Value investing: the use of historical financial statement information to separate winners from losers. *Journal of Accounting Research*, 38, 43-51.
- Robinson, T. R., Greuning, H. V., Henry, E and Broihahn, M. A. (2009), *International Financial Statement Analysis*. CFA Institute Investment Series, 2nd edition, John Wiley & Sons.
- S&P Capital IQ, Capital IQ Market Insight Database.
- ThomsonONE, Public/Private Company Overviews Database

Abbreviations

¥	Yuan
¥...k	Thousand Yuan
¥...m	Million Yuan
6mxxA	Actual figures as at 31 June 20xx
6mxxG	Management Guidance for 31 June 20xx
A	Actual
β	Beta
BS	Balance sheet
CAGR	Compound Annual Growth Rate
CapEx	Capital Expenditure
CAPM	Capital Asset Pricing Model
CDS	Country Default Swap
CFF	Cash Flow from Financing Activities
CFI	Cash Flow from Investing
CFO	Cash Flow from Operations
CR	Current Ratio
CRP	Country Risk Premium
D	Debt
D&A	Depreciations & Amortizations
DCF	Discounted Cash Flow
DecxxA	Actual figures as at 31 December 20xx
DecxxF	Forecasted figures as at 31 December 20xx
DPO	Days payable outstanding
DSO	Days sales outstanding
E	Equity
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before Interest, Tax, Depreciation & Amortization
EBT	Earnings before Tax
EV	Enterprise Value
FCF	Free cash flow
FCFF	Free cash flow to the Firm
FYxxA	Financial years ended as at 31 December 20xx
FYxxF	Financial years forecasted for 31 December 20xx
FYxxG	Financial years Management Guidance for 31 December 20xx
g	Terminal growth rate
GBV	Gross book value
GDP	Gross Domestic Product
GM	Gross Margin
ISEG	Lisbon School of Economics & Management
Kd	Cost of debt

Ke	Cost of equity
LT	Long term
LTD	Long Term Debt

MRP	Market Risk Premium
NBV	Net book value
NI	Net Income
NWC	Net working capital
O&M	Operation and maintenance expenses
OpEx	Operational Expenditure
PL	Profit & Loss
PP&E	Property, Plant and Equipment
R	Return
Rd	Cost of debt
Rf	Risk free rate
Rm	Market return
ROA	Return on Assets
SG&A	Selling, General & Administrative Expense
ST	Short term
STD	Standard Deviation
T	Corporate income tax rate
TA	Total Assets
TEV	Total Enterprise Value
VN	Turnover
WACC	Weighted Average Cost of Capital
WC	Working Capital
Wd	Weight of debt
We	Weight of equity
xxx margin	xxx over Revenue
YExx	Year ending as at 31 December 20xx
YExxF	Year ending forecasted for 31 December 20xx