

**MASTER**  
**FINANCE**

**MASTER'S FINAL WORK**  
PROJECT

EQUITY RESEARCH: WULIANGYE YIBIN CO., LTD.

XINRUI CAO

OCTOBER – 2018

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**SUPERVISION:**

**ANA ISABEL ORTEGA VENÂNCIO**

**OCTOBER - 2018**

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## **Abstract**

This project contains the detailed valuation and the respective estimation of Wuliangye Yibin Co., Ltd. intrinsic share value for the year end of 2018, according to ISEG's Master in Finance final work project.

The choice of Wuliangye Yibin Co., Ltd. comes from my personal interest in the Baijiu industry which is a traditional industry in China. The price target was obtained through an absolute valuation method, more specifically the Discounted Cash Flow (DCF) method. In addition, we used Relative Valuation Method approach, as a complemented method, in order to support the final recommendation. A sensitivity analysis and a Monte Carlo simulation were performed to further complement the analysis. With a price target of CNY 72.63 at YE2018, a downside potential of 3.78%, from March 8<sup>th</sup>, 2018, current price of CNY 75.49, our final recommendation for Wuliangye Yibin Co., Ltd. is to SELL, taking into consideration, the risks that may occur and that can affect the company's performance. Our risk assessment estimates a high risk for the company.

**Key words:** Baijiu industry; Discounted Cash Flow method; Relative Valuation method

## Resumo

Este projeto inclui uma avaliação detalhada e a respetiva estimação do valor das ações da Wuliangye Yibin para o final do ano de 2018, de acordo com as regras do projeto final do Mestrado em Finanças do ISEG.

A escolha da empresa Wuliangye Yibin deve-se ao meu interesse pessoal na indústria de Baijiu, que é uma das indústrias mais tradicionais da China. O preço-alvo foi obtido através do método de avaliação absoluta, mais especificamente o método do Flow to Equity (FTE). Adicionalmente, utilizamos o método de avaliação relativa, o método dos Múltiplos, como método complementar para apoiar a recomendação final. Uma análise de sensibilidade e uma simulação de Monte Carlo foram realizadas para analisar a robustez das estimativas obtidas. Com um preço-alvo de CNY 72.63 para FA2018 e um potencial de desvalorização de 3.78%, face ao preço de CNY 75.49 do dia 8 de março de 2018, a nossa recomendação final para a Wuliangye Yibin é de VENDA. A avaliação de risco estima um risco elevado para a empresa.

**Palavras-chave:** Wuliangye Yibin; Equity Research; Discounted Cash Flow method; Flow to Equity; Relative Valuation method; Indústria do Baijiu

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## Abbreviations

¥ – Yuan

BU – Business Unit

CapEx – Capital Expenditure

CIP – Construction-In-Progress

CNY – Yuan

COGS – Cost of Goods Sold

DCF – Discounted Cash Flow

D&A – Depreciation and Amortization

EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization

EBIT – Earnings Before Interest and Taxes

ERP – Equity Risk Premium

EV – Enterprise Value

FCFE – Free Cash Flow to the Equity

FTE – Flow to Equity

GDP – Gross Domestic Product

g – Perpetual Growth Rate

IMF – International Monetary Fund

MRP – Market Risk Premium

NPV – Net Present Value

NWC – Net Working Capital

Rd – Cost of Debt

Re – Cost of Equity

ROA – Return on Asset

ROE – Return on Equity

R&D – Research and Development

T – Effective Tax Rate

TV – Terminal Value

YE – Year Ending

YoY – Year on Year

# 1. Research snapshot

(YE2018 price target of CNY 72.63; 3.78% Downside Potential; High Risk; Final recommendation: SELL)

Wuliangye Yibin CO., LTD. (Wuliangye Yibin) is a Chinese state-owned enterprise, listed in Shenzhen Stock Exchange, mainly engaged in the production and sale of distilled liquor.

Figure 1: Stock Price of Wuliangye Yibin



Source: Wind, Author

**SELL** is our recommendation for Wuliangye Yibin Co., Ltd. with a price target of CNY 72.63 at YE2018 using discounted method. The relative valuation supports our Sell recommendation. This offers a downside potential of 3.78%, in comparison with the closing price of CNY 75.49 on March 8<sup>th</sup> of 2018, although with high risk (Table 1, 2, 3 and Figure 1).

We expect that Wuliangye Yibin's sales to grow in the next years, from CNY 30.19 billion in 2017 to CNY 45.34 billion in 2022F. In 2018, the company will implement reforms in sale channel under the "1-3-3" program, which promotes operating efficiency of the company's entire sales system, and increases brand awareness. Due to the improvements on the sale channel, the sales cost in 2017 was CNY 3.63 billion, a YoY decrease of 22.77%. EBIT margin increased by 6.48% YoY and net profit margin by 4.41% in 2017 and our analysis resulted in a sustained growth from 2018F to 2022F.

Table 4: Financial Highlights

Financial Highlights	2017	2018F	2019F	2020F	2021F	2022F
Total Revenue*	30187	32828	35657	38709	41935	45334
Net Profit*	9674	11042	12364	13706	15233	16523
Total Assets*	70923	78389	87906	98451	110231	122888
Total Liabilities*	16248	16864	18656	20636	22896	25228
Net Profit Margin (%)	32.05%	33.64%	34.67%	35.41%	36.33%	36.45%
ROE (%)	18.14%	18.38%	18.29%	18.04%	17.86%	17.33%
ROA (%)	13.64%	14.09%	14.06%	13.92%	13.82%	13.45%

Source: Company Data, Author

\*in CNY million

## WULIANGYE YIBIN CO., LTD.

Table 2: Analyst's Risk Assessment

Low	Medium	High

Source: Author

Table 1: Wuliangye Yibin's Market data

Market Profile	
Closing Price	¥75.49
Last 52-wk price range	¥58.02 – ¥93.18
Average daily volume	26,590,710
Shares outstanding	3.8 B
Market Cap	233.712 B
P/E	21.04

Source: Author

Table 3: Valuation output

Valuation method	YE2018 Target Price	Upside Potential
DCF	¥72.63	-3.78%
Multiple (average)	¥77.41	2.55%

Source: Author

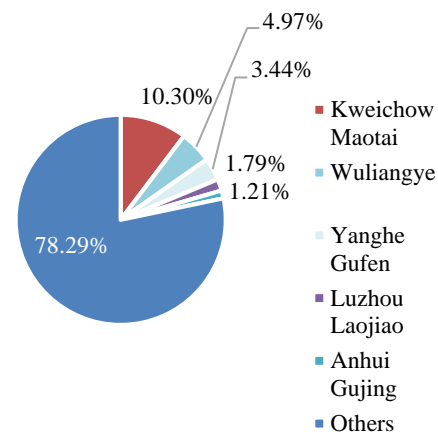
## 2. Business Description

WULIANGYE YIBIN CO., LTD., is a Chinese state-owned enterprise, and mainly engaged in the production and sale of distilled liquor. It has diversified business units, which include logistics, modern machinery manufacturing, polymer materials, bio-engineering, pharmaceuticals, printing and other related service sectors. The company has more than 25,000 employees, and an ancient producing pond which occupies more than 12 square kilometers and never stopped the fermentation. Wuliangye Yibin adheres to the strategy “Quality is the key”, so it continuously optimizes its product structure, integrates its industrial resources, and enhances its operating performance. Due to these efforts, the company was awarded a golden prize at Expo Milano in 2015 and earned several titles such as the Chinese top 10 most respected listed company and Chinese Top 50 Brands. The production site is located in the Yibin County, Sichuan Province. Both UNESCO and FAO consider this location as the most suitable for the fermentation site for high-quality distilled liquor. With this environmental advantage, the company has developed an industry structure with liquor as its core business and other liquor-based business.

The company's main product, Baijiu, is a traditional fermented alcoholic drink originated in China, which is typically obtained by natural fermentation. As one of the seven major distilled liquors in the world, Baijiu has a high reputation and occupies an important position in the Chinese culture. In China, drinking has always played a very significant role in dining culture. Baijiu is drunk almost exclusively during meals, when important relationships are built and maintained.

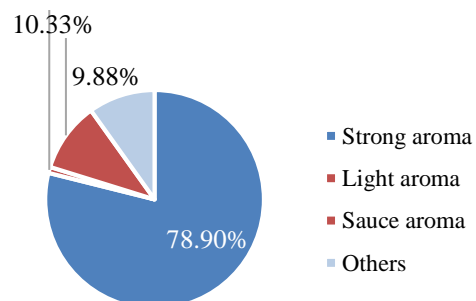
Baijiu has different types of flavours: strong aroma, light aroma, and sauce aroma. The most popular flavour is strong aroma, whose market share accounts for more than 70% of the total Baijiu market in China (see

Figure 2: 2017 Chinese spirit market share on value basis



Source: Company data, author

Figure 3: 2017 Market share of different types of Baijiu in China



Source: Wind

Figure 3). The different types of Baijiu vary in taste, ingredients, quality, and price. The cheapest type of Baijiu costs between CNY 2 and CNY 5, contained in a small bottle, with lower quality, and can be found almost everywhere. Meanwhile, the more expensive brands can often go for over CNY 1,000 per bottle (500 ml).

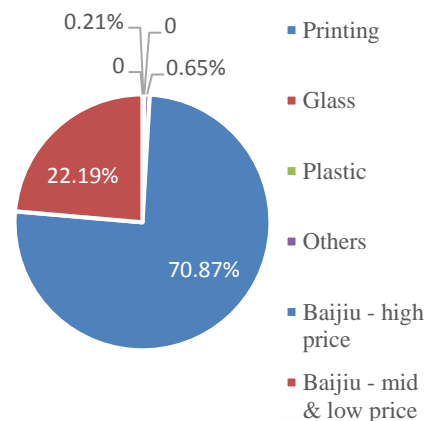
The core brand of the company is a strong aroma Baijiu with high quality, Wuliangye 52% ABV, using the same name of the company. Wuliangye 52% ABV accounts for 90% of high-end Baijiu market. Along with the production of the high-alcohol drinking, the company also has by-products, the mid- & low-end Baijiu, with lower alcohol content and lower price. The expended products aloe the company to meet the needs of consumers from different income levels. In 2017, 70.87% of the revenue came from high-end Baijiu, 22.19% from the mid- & low-end Baijiu, and the other business only accounts for 7% (see Figure 4).

In 2017, the company achieved a total operating revenue of CNY 30.19 billion, with an increase of 22.99% YoY. The net profit was CNY 9.67 billion, with a growth of 42.58% YoY. The net cash flow from operating activities was CNY 9.77 billion, compared with last year CNY 11.69 billion, implied a decrease of 16.51% YoY (see Figures 5 and 6).

### “1-3-3” program

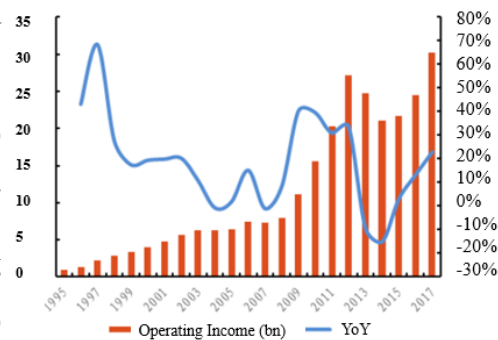
In June of 2018, the company introduced the “1-3-3” program, standing for one project, three systems, and three platforms. More specifically, the project is the "10 Thousand Shop Project". The systems include product system, channel system and team system. As for the platform, the company established a digital supply chain platform, a digital Internet platform of omni-channel and a decision-making platform based on big data in marketing. This program will promote production and the operating efficiency of the company's entire sales system (see Figure 7).

Figure 4: 2017 Wuliangye Yibin's Operating Revenue



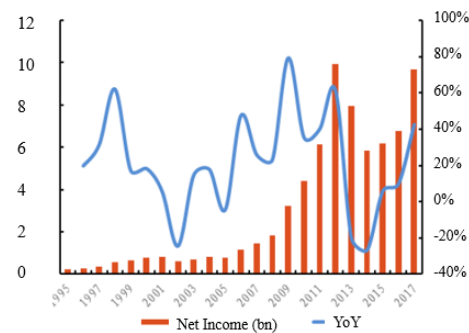
Source: Company data, author

Figure 5: 1995-2017 Wuliangye Yibin's Operating Income



Source: Wind, Author

Figure 6: 1995-2017 Wuliangye Yibin's Net Income



Source: Wind, author

### “10 Thousand Shop Project”

In the industry, Baijiu is sold through distributors, authorized dealers, retailers and representatives. In the past, other Baijiu companies, like Kweichow Maotai, emphasized the importance of small dealers and representatives. In contrast, the main sales chain of Wuliangye Yibin is through large distributors and authorized dealers who offered to the company a sales platform to achieve rapid growth during the initial stage of the Baijiu industry. However, since large-scale distributors and authorized dealers had strong pricing power, they used to buy huge amounts of Baijiu products at low price, and sell them to public consumers at high price. This sales chain resulted in inefficient inventory management and disturbance in the products’ price.

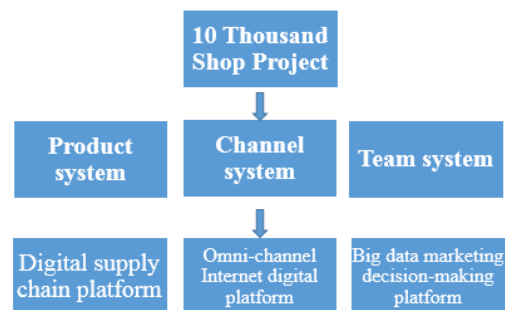
In recent years, the company has adopted a series of new commercial strategies. The “Expansion of Marketing Channel” intends to increase brand awareness and at the same time create their own shops to sell their own products directly to consumers. Compared to the distributor system, own-shops allow Wuliangye Yibin to expand the market of high-end products.

To increase market penetration, the company implemented the “Hundreds of cities, thousands of counties, and ten thousand stores” projects. By the end of 2017, it built 7,000 core point-of-sales and 1,000 Wuliangye specialty stores in large and medium cities. In 2018, the company target to have 8,000 core point-of-sales and 1,500 specialty stores.

**Product system:** Development of high-end products & Reduction of low-end products

Brand recognition plays an essential factor in the Baijiu industry. Noticing the increase in both consumption and price of high-end Baijiu, Wuliangye Yibin decided to focus on the strengthening brand and competitiveness of its core products (Wuliangye 52% ABV), while reducing the production of its low-end products.

Figure 7: Wuliangye Yibin's 1-3-3 system



Source: Company 2017 annual report, author

The company's brands of mid- and low-ended Baijiu used to be numerous and chaotic with insufficient brand recognition in the past. The company currently reduced the number of mid- and low-end brands from 130 to 49.

**Sale channel system: “Wuliang E Shop”**

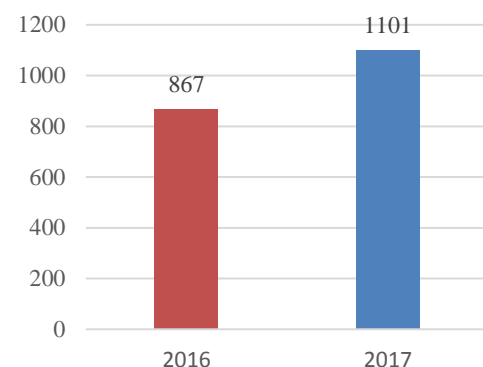
“Wuliang E Store” is another type of retail shop. Consumers can buy products through internet and pick them up through QR Code or face recognition in the “Wuliang E Store”. Accompanied by application in smartphones which is based on big data and directly to the end consumers, the company could combine the operation and management, integrate third-party supply chain management with information technology, retail operation experience and other advantageous resources. In this way, the company can have stronger control in channel inventory and better understanding of the market.

According to the company's 2017 annual report, the number of dealers was 1,101, increased 26.9% YoY, while the sales of the top five clients accounted for 10.86%, which indicates a third-time of yearly consecutive decline (Figure 8 to 9). Due to the improvement of sale channel system, the sales cost in 2017 was CNY 3.63 billion, a YoY decrease of 22.77%. Moreover, Wuliangye Yibin plans to continue its investment in expansion program of sale channel, so as to improve the company’s capacity to meet to the market demands and increase the diversity of supply.

**Team system: “Recruitment Program of Expert”**

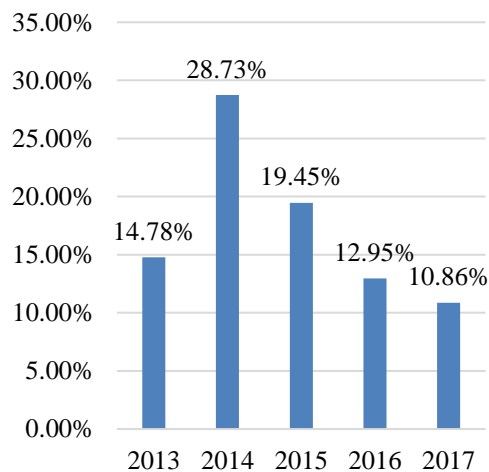
“Recruitment Program of Expert”, also known as “the Thousand Talents Plan” is a program of rewarding high-level talents that not only master the first-class skills of Baijiu producing both, but they also have leadership and team organization skills. To improve staff efficiency, the company awards outstanding employees with prizes that range from CNY 80 thousand to 2 million.

Figure 8: Wuliangye Yibin's Number of dealers



Source: Company data, author

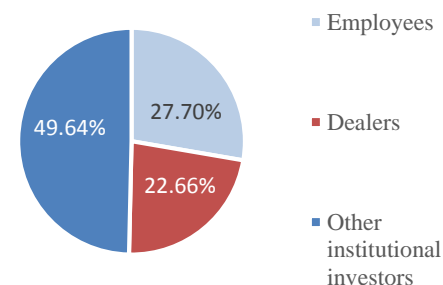
Figure 9: Percentage of sales of top 5 customers



Source: Company data, author

In April of 2018, the company did a private offering of 85.64 million shares at the issue price of 21.64 yuan/share. The total amount raised was CNY 1.85 billion, and the net proceeds were CNY 1.82 billion. In this offering, the employee subscribed for 510 million shares, and the dealer subscribed for 420 million shares (see Figure 10). After the completion of private offering, the shareholders' interests are aligned with those of the employees.

Figure 10: Percentage of private offerings in April 2018



Source: Company data, author

### Digital supply chain platform

### Digitization platform of omni-channel on internet

### Decision-making platform based on big data in marketing

In December of 2017, Wuliangye Yibin and IBM agreed on a strategic cooperation to promote a digital upgrade, industrial transformation and business model innovation of Wuliangye Yibin's entire management system. The company can draw support from IBM's cloud computing, big data, block chain, artificial intelligence and other technologies to develop strategic cooperation through the value chain of Baijiu industry, mainly machinery, packaging, logistics, health, finance, and artificial intelligence. The company intends to be the top digital enterprise in Chinese liquor Industry.

## 3. Management and Corporate Governance

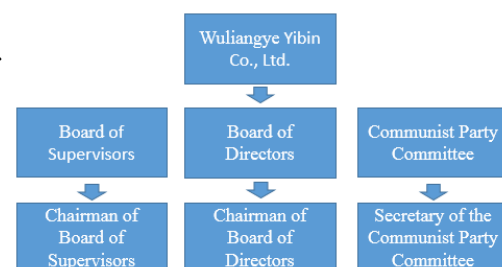
### Corporate Governance:

Wuliangye Yibin includes as a two-tier board system. The Board of Directors and the Board of Supervisors. As all Chinese listed firms, Wuliangye Yibin is also supervised by the department of Communist Party Committee which politically controls of the company (Figure 11).

**The Board of Supervisors** includes representatives of the shareholders and the employees of the company. In Wuliangye Yibin, there are three representatives of shareholders and two representatives of the employees.

**The Board of Directors** is composed by seven members of which three

Figure 11: Corporate governance system of Wuliangye Yibin



Source: Company data, author



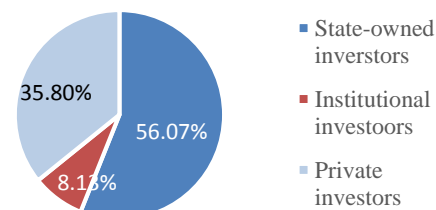
are independent directors elected from the General Shareholders Meeting. Mr. Li Shuguang was appointed as the chairman of the Board of Directors and Secretary of the Communist Party Committee on 23 of March 2017.

**The Communist Party Committee** overrules all Chinese state-owned enterprise (SOE). As the SOE enhance the strength of the whole nation, the Chinese Communist party has maintained representative committees inside those companies for decades and recently has been seeking to strengthen their power in supervision, management and administration. In Wuliangye Yibin, the Communist Party Committee not only play an active role in supervising, but also in managing. Moreover, the Communist Party Committee takes the responsibilities in generate strategies of the company.

**Ownership structure:**

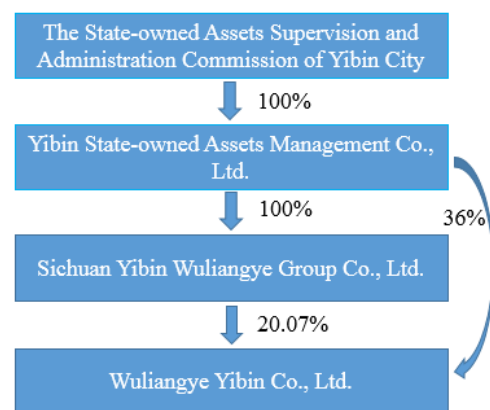
According to the 2017 annual report, the number of shares of outstanding is 3,795,966,720. Figure 12 presents that shareholder structure. Wuliangye Yibin’s shares are held by two state-owned corporations, Yibin City State-owned Assets Management Co., Ltd. (36%) and Sichuan Yibin Wuliangye Group Co., Ltd. (20.07%). The remaining 8.13% are held by institutional investors, mainly investment company owned by the Chinese government, offshore hedge funds, insurance companies, pension funds and other corporations. The State-owned Assets Supervision and Administration Commission of Yibin City is the actual controller of Wuliangye (see Figure 13, Table 5 and Appendix 5).

Figure 12: Types of shareholders of Wuliangye Yibin



Source: Company data, author

Figure 13: Control Relationship of Wuliangye Yibin



Source: Company data, author

TABLE 5: TOP INVESTORS

NAME	SHARES OF WLY COMMON STOCK	PERCENTAGE
<i>YIBIN CITY STATE-OWNED ASSETS MANAGEMENT CO., LTD.</i>	1,366,548,020	36.00%
<i>SICHUAN YIBIN WULIANGYE GROUP CO., LTD.</i>	761,823,343	20.07%
<i>HONG KONG SECURITIES CLEARING COMPANY LIMITED</i>	114,500,437	3.02%
<i>CHINA SECURITIES FINANCE CORP., LTD.</i>	64,872,997	1.71%
<i>CENTRAL HUIJIN INVESTMENT CO., LTD.</i>	40,192,100	1.06%

Source: Company data, author

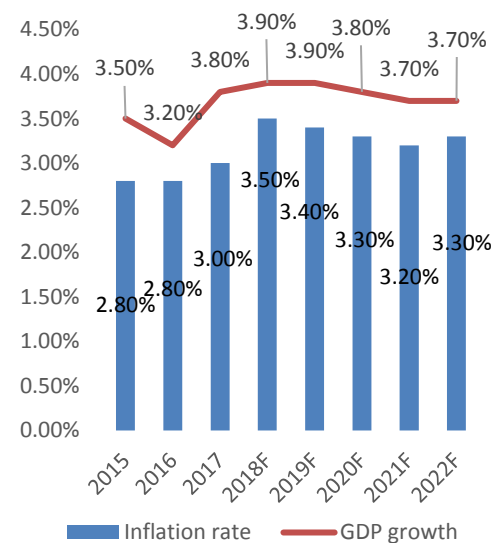
## 4. Industry

### Global Economic Outlook

According to the IMF World Economic Outlook in 2017, the world’s GDP growth rate (3.8%) increased by 18.75% YoY. In terms of inflation rate, it grew by 7.14% to 3.00% compared with last year. The world’s GDP growth rate is expected to reach 3.9% in 2018 and 2019. Based on the expectation of IMF, the World GDP growth rate and inflation rate both will slightly decrease in the following years. The GDP growth rate will be 3.9% in 2018 and 3.7% in 2022F and inflation rate will drop from 3.5% to 3.3% (see Figure 14). This may result in a decrease in the private consumption, one of the key drives for the company’s performance.

The decreasing global economy performance is due continuing trade tensions. In the past few months, the United States has imposed tariffs on various types of imports, followed by retaliatory measures from its trade partners. Meanwhile, the North American Free Trade Agreement and the economic arrangements between the UK and the other EU countries are being renegotiated. This increased trade tensions may undermine global economic growth. The uncertainty on potential trade opportunity may also be a huge hindrance to investment. At the same time, the expansion of

Figure 14: World's GDP Growth and Inflation Rate



Source: IMF, author

trade barriers may increase the cost of tradable goods, and undermine the global supply chain, reducing the productivity and revenue of the companies. However, since the Baijiu industry has been focusing mainly on the domestic market so far, the negative impact of global trade tension will not be excessively significant.

## China Economic Outlook

### *GDP growth rate*

The Baijiu industry mainly focuses on the domestic market, the relevant policies, regulations and economic performance of China shall play significant role in forecasting the operating activities and future outcomes for Wuliangye Yibin.

According to IMF, China’s GDP growth rate will decline in recent following years (see Figure 15). In contrast, the cost of borrowing in China will grow, which may result in less investment and in a decrease in operating activities. As such, it presents moderate risk to Wuliangye Yibin.

### *Inflation rate*

The inflation rate, as we can observe in Figure 15, will steady and will fluctuate around 2.7% in the next few years. With a moderate level of inflation rate, a healthy level of consumer spending can promote development of company.

### *Demographic structure*

Demographic structure is another important factor that affects the Baijiu consumption in China. The birth rate in China peaked in the period from 1950, until the year of 1990. This Baby Boomer generation now are in their 20s - 60s, which means they are the main consumers. Moreover, the two emerging consumer groups are expanding: the middle classes and the post-90s. They have several identical characteristics, such as strong desire to consume, brand awareness and high quality. The target customer of

Figure 15: China's GDP Growth and Inflation Rate



Source: IMF, author

Wuliangye Yibin are the 30s-60s group, especially the middle classes, which means the company has a large group of potential customers in China (see Table 6).

Table 6: Demographic Structure in China

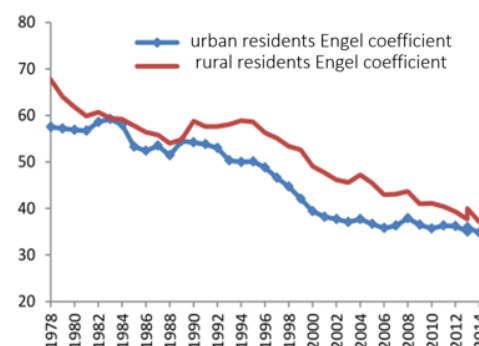
	2008	2012	2016
>60 years	12.77%	14.33%	16.65%
35-60 years	44.96%	43.10%	43.59%
20-34 years	20.30%	24.48%	23.60%
10-19 years	14.60%	11.89%	10.54%

Source: Wind, author

### Consumption expenditure

The proportion of urban residents' food consumption in total consumption expenditure in China dropped from 57.5% in 1978 to 34.8% in 2015 (see figure 16). The Engel coefficient gap between urban residents and rural residents also decreased from 1994 till 2014, which accounts for the increase of per capita disposable income. Overall Chinese consumers are spending more on other things like Baijiu, than food.

Figure 16: Engel coefficient of China 1978 - 2014

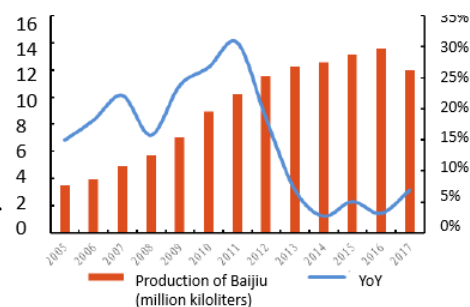


Source: Wind

### Baijiu industry outlook

The National Bureau of Statistics has released the 2017 China's Baijiu industry data, in which the total volume of Baijiu made in 2017 was 11.98 million kiloliters, a decrease of 11.78% compared to 2016. The sales revenue of Baijiu was CNY 612.57 billion, corresponding to an increase of 14.4% YoY, and the total profit was CNY 102.85 billion, an increase of 9.24% (see Figures 17 and 18).

Figure 17: Baijiu Production in China



Source: Wind

In the first quarter of 2018, the total operating income of listed companies in the Baijiu industry was CNY 61.69 billion, an increase of 27.65% YoY, and the net profit grew by 38.30% YoY to CNY 22.79 billion. The sales

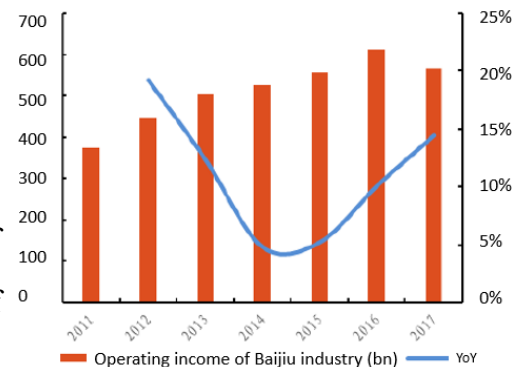
revenue and net profit of second level Baijiu (a kind of Baijiu close to high-end Baijiu) in 2018 Q1 increased by 31.41% and 44.24% YoY, respectively. Due to the optimization of product structure and construction of the sales chain, the sales for high-end and second level Baijiu is expected to maintain the upward trend in 2018.

Between 2002 and 2012, the Baijiu industry boomed and the CAGR of production increased by 20% (see Figure 17). The total consumption of Baijiu is three parts: government, business and private consumptions. In 2012, the percentage of total consumption for those parts were 40%, 50%, and 10%, respectively. The proportion of government consumption was high, and consequently the Baijiu industry has extremely affected by the anti-corruption policies enacted in April of 2012. Since then, Chinese government has inhibited the consumption of public funds on official car usage, meals and oversea visits. As a result, the growth rate of Baijiu production has significantly declined from 18.55% in 2012 to 2.75% in 2014 and the sales revenue growth rate has experienced a dramatic decrease from 26.82% in 2012 to 5.7% in 2014 (see Figures 17 and 18).

To overcome the reduction on public consumption, Baijiu companies turned to the masses since 2013, through innovations in sales chain, product system, team system. In recent years, the growth rate of private consumption has surpassed the government consumption growth rate. In 2016, private consumption accounted for half of total consumption, while government consumption only accounted for 5% (see figure 19).

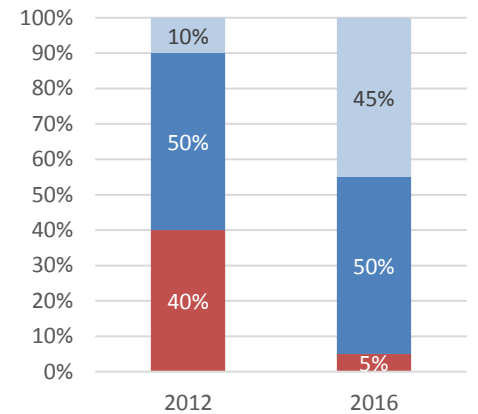
The overall Baijiu market in China is highly fragmented. Figures 20 and 21 present that five leading Baijiu producers account only for approximately 22% of total market capacity in 2017 and accounted for 14.46% in 2015. Meanwhile, the top two producers are mainly focusing on high-end Baijiu. In the future, it is expected that market of Baijiu industry will gradually concentrate on high-end Baijiu. The high-end Baijiu companies, Kweichow Maotai and Wuliangye have experienced

Figure 18: Operating income of Baijiu industry in China



Source: Wind

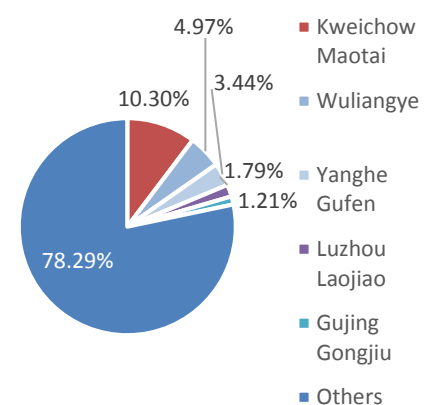
Figure 19: Consumption structure of Baijiu in China



Source: China industry information

- Private consumption
- Business consumption
- Government consumption

Figure 20: 2017 Chinese Baijiu market share on value basis



Source: Wind

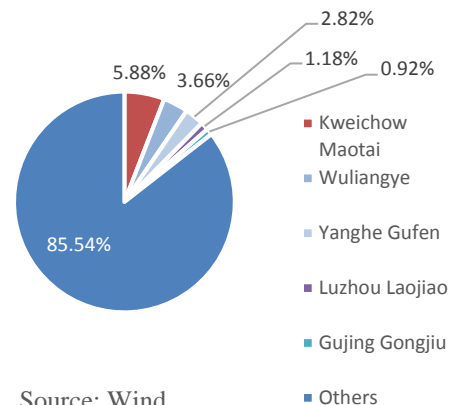
higher growth rates than other enterprises in this industry. The market share of Kweichow Maotai has increased from 5.88% in 2015 to 10.30% in 2017, while Wuliangye has grown from 3.66% to 4.97%. In general, the market share of 10 leading enterprises has raised from 17.10% in 2015 to 25.14% in 2017.

Since Baijiu is high concentration alcohol, it is not good for health. In recent years, a large amount mid- & low-end Baijiu companies is working on research and development for healthier Baijiu products.

### Peer group

As mentioned before, the Chinese Baijiu industry is a domestic and traditional industry. In total, there are 20 listed companies in the Baijiu industry. Based on the market shares, we can distinguish of between three types: the high-end Baijiu companies, such as, Kweichow Maotai, the Medium-end Baijiu companies like Gujing Gongjiu, and the Low-end Baijiu companies. Table 7 presents the list Baijiu companies by type.

Figure 21: 2015 Chinese Baijiu market share on value basis



Source: Wind

Table 7: List of Baijiu companies in China

High-end Baijiu Companies	Mkt cap CNY bn	Middle-end Baijiu Companies	Mkt cap CNY bn	Low-end Baijiu Companies	Mkt cap CNY bn
Kweichow Maotai	592.7	Shanxi Fenjiu	30.0	Laobaiganjiu	9.9
Wuliangye Yibin	211.3	Gujing Gongjiu	25.7	Tuopai shede	8.9
Yanghe Gufen	130.8	Kouzijiao	23.3	Yilite	8.6
Luzhou Laojiao	79.9	Jinshiyuan	16.6	Keke qingjiu	7.9
		Yingjia Gongjiu	15.2	Jinhuijiu	6.9
		Gujingong B	14.7	Jiugujiu	6.9
		Shuijingfang	12.0	Jinzhongziju	4.4
		Shunxing Nongye	11.4	Huangtai jiuye	2.5

Source: China industry information, author

Table 8: Peer Group

Company Name	Recent Price (CNY)	Market Cap (CNY billion)	Price/Earnings
Wuliangye Yibin	74.19	211.3	21.04
Yanghe Gufen	134.11	130.8	25.29
Luzhou Laojiao	56.20	79.9	22.66
Gujing Gongjiu	95.09	25.7	27.71
Kouzijiao	56.83	23.3	23.48

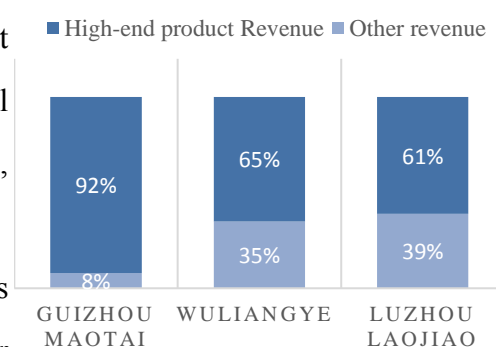
Source: China industry information, author, 27/07/2018

### Comparative Analysis

Baijiu is typically made by mixing steamed sorghum grains, water, and a special fermentation. The process of production is affected by the geographic conditions and technology used by the company. Therefore, high-end Baijiu companies are able to differentiate their products based on those characteristics. Figure 22 presents the gross profit of the high-end Baijiu companies. High-end products account for the greatest share on profits, their strategy will be to improve the quality of traditional high-end Baijiu and maintain their competitive advantage. For instance, Wuliangye increased 54.1% YoY the investment in R&D in 2016.

The medium-end companies' is to develop new and healthier products with lower price to expand their markets and increase profitability. Their investments have been mostly on advertising, accounting for 4% to 8% COGS. High-end companies invest 2% to 5% in advertising. In contrast, low-end companies have a broad market and their strategies rely on price and cost advantage.

Figure 22: 2016 Gross profit distribution for high-end baijiu company



Source: Wind, author

## SWOT analysis

Table 9: SWOT analysis of Wuliangye Yibin

Strengths	Weaknesses
One of the market leaders in the industry State-owned enterprise Innovation of “1-3-3” program Strong brand recognition Customers loyalty Low level of debt Geographical advantages Investment in R&D	Lack of international market Single product – only Baijiu
Opportunities	Threats
Expansion to international markets Technological innovation for healthier Baijiu product	Government regulations and policies Economic slowdown in China Tax policy Fragmented industry Trade Tariffs

Source: Author

## Porter’s Five Forces

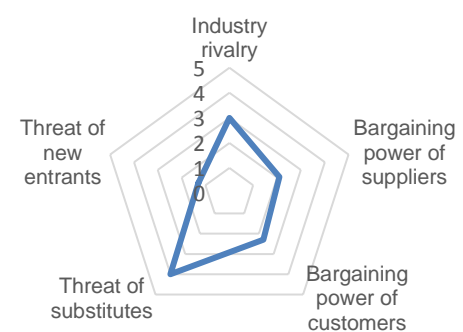
### Threat of new entrants: Low

There are several barriers to entry in the Baijiu industry. For instance, new entrants need a large amount of initial funds, equipment, technology and appropriate geographic site. They will also have to compare with existing Baijiu companies which have already built up a reputation and have a high level of customers’ loyalty. It makes new entrants hard to obtain large market share. The threat of new entrants is low in the Baijiu industry.

### Bargaining power of customers: Medium-low

The primary clients for Baijiu industry are distributors and dealers, who buy products in large quantities, with medium bargaining power. At the same time, with the implement of “1-3-3” strategy, the company expects to gradually sell directly to the end users. The bargaining power of customers represents a medium-low threat to the company.

Figure 23: Porter’s five forces



Source: Author, company data



### **Bargaining power of suppliers: Medium-low**

The cost of raw materials and production constitute the primary costs of Baijiu products. In China, there are a large number of manufacturers, therefore Baijiu companies have a number of choices of suppliers. Even though China enjoys an enormous production of grains, the output and price of raw materials are highly affected by weather conditions. Considering those two factors, the bargaining power of suppliers is medium-low.

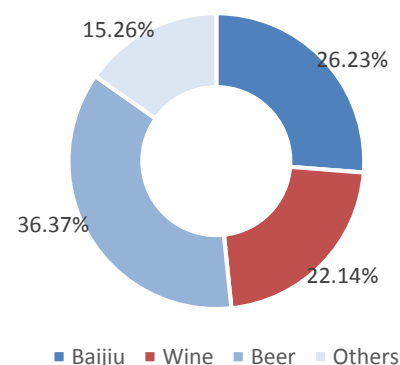
### **Threat of substitutes: Medium-high**

Even though Wuliangye Yibin has different series of Baijiu, the company only sells one type of beverage: Baijiu. There is a possibility that consumers might substitute Baijiu by wine, beer and other spirits (see Figure 24). Compared with Baijiu, wine has a better taste and is healthier. In terms of the price, beer is less expensive. Moreover, since China entered World Trade Organization (WTO), the tariffs on foreign spirits has dropped, which resulted in the pouring of a large amount of foreign spirits into the Chinese market. However, as mentioned before, Baijiu plays an important role in meals in China, thus it is irreplaceable in official and business occasions. Threat of substitutes is medium-high.

### **Industry rivalry: Moderate**

As mentioned before, Baijiu industry is highly fragmented. The geographic conditions affect Baijiu flavours and tastes. Thus, each region prefers different preference of brands. With the strong brand and client loyalty, the industry rivalry is moderate.

Figure 24: Proportion of alcohol sales of China in 2017



Source: Wind, author

## 5. Investment Summary

**SELL** is our recommendation for Wuliangye Yibin with a price target of CNY 72.63 at YE2018 using Flow to Equity (FLE) method. This offers a downside potential of 3.78%, in comparison with the closing price of CNY 75.49 on March 8<sup>th</sup> of 2018, although with high risk (Table 10). The relative valuation supports our Sell recommendation (Table 11), since we obtained an average price target of CNY 77.41, representing an upside potential of 2.55%.

With respect to Wuliangye Yibin's core business, the company is market leader in the industry. It is expected to see a 2018F to 2022F revenue CAGR of 8.2%. Due to the improvement in the sale channel, there was an increase of EBIT margin from 40.91% in 2018F to 46.42% in 2022F and net profit margin by from 32.05% in 2018F to 36.45% in 2022F.

During 2018F to 2022F, we expect a decrease of the total asset turnover, reflecting a drop in efficiency with which a company is deploying its assets in generating revenue. Moreover, the reduction of financial leverage accelerates the downward trend of ROE and ROA.

There is possibility of mergers and acquisitions with another company of the industry, but it's virtually impossible to predict who or when is going to be acquired.

### Valuation Methods

We obtained our target price using Discounted Cash Flow (DCF), more specifically the FTE method. We use this model because the debt-to-equity ratio is very low. Concerning the relative valuation method, we used the multiple approach through P/E, P/B and P/sales ratios.

### Investment Risks

Investors must be aware of the impact of political regulation, Chinese economic slowdown and volatility of Chinese stock market. All these factors might indirectly affect Wuliangye Yibin's ability to generate sales revenue.

In order to compute the impact of the main investment risks on the price target, we performed a sensitivity analysis and a Monte Carlo simulation. The Monte Carlo simulation's average price is CNY 73.72, the median is CNY 72.7 and the standard deviation is CNY 8.94. These numbers support our Sell recommendation.

Table 10: DCF Method

DCF Method	
Value of equity net of minority interest	432.168 B
Shares outstanding	3.8 B
Price target	¥72.63
Current price 2018/3/8	¥75.49
Downside potential	3.78%

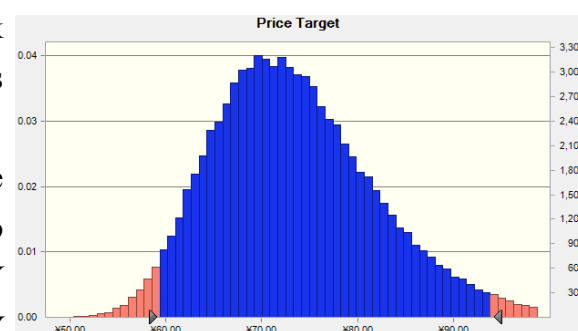
Source: Author, Company data

Table 11: Multiple Method

Multiple Method	
P/E Price target	¥72.08
P/B Price target	¥91.72
P/Sales Price target	¥68.45
Average Price target	¥77.41
Current price 2018/3/8	¥75.49
Upside potential	2.55%

Source: Author, Company data

Figure 25: Monte Carlo simulation



Source: Author, Oracle Crystal Ball

## 6. Valuation

We used Wuliangye Yibin’s consolidated statement for the period between 2015 and 2017, industry data, and global economic data to perform the valuation.

### Key Valuation Drivers

#### Total Revenue

Wuliangye Yibin’s total revenue was determined by estimating the sales for each business unit (BU). We focus on estimating the revenues of high-end Baijiu and mid- & low-end Baijiu, since these two BUs account for 70.87% and 22.19% of total revenue, respectively.

We assume that the quantity of high-end Baijiu will increase at the same rate as Chinese GDP growth rate (IMF, 2017), for the next five years. As for the price of Baijiu, we estimated a growth rate of 3%, higher than the inflation rate (IMF, 2017), for both types of Baijiu. Meanwhile, since the company intends to reduce low-end products, the quantity and price of mid- & low-end Baijiu are expected to increase less than the sales of high-end Baijiu.

The revenue of the other business units is expected to grow at the same rate as the Chinese GDP growth rate, until 2022F.

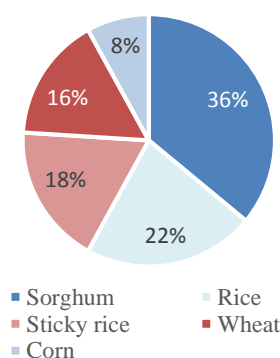
To forecast the BU’s revenue, we multiply the estimated quantity of high-end and mid- & low-end Baijiu by the respective expected unit prices then, we add the estimated revenue of other business units.

#### Main Cost

The company’s main costs include raw material cost, employee wage expenses, cost of energy and manufacturing.

Baijiu is made by sorghum, rice, sticky rice, wheat and corn, according with the percentages presented in Figure 26. We collected the price information for each component through the Chinese Cereal Center and compute a weighted average of the raw materials price per ton, according to the percentage of each component. Based on industry average, 5 tons grains could make 1 ton Baijiu which represents productivity for grains to Baijiu. Note that we assume that Wuliangye Yibin’s will be more efficient in producing Baijiu in following years, thanks to the “Recruitment Program of Expert”. We multiply total quantity of Baijiu sold by the production rate to get the total raw material cost. Due to the company’s “Recruitment Program of Expert”, we also assume that the wage expenses

Figure 26: Percentage of Baijiu's components



Source: Wind, author

will increase more than other expenses for next years.

### Capital Expenditure (CapEx)

The estimation of the company's CapEx includes Gross PP&E, other long-term assets and intangible assets. For each component, we compute the ratio of Capex as a percentage of revenue. Since the company intends to expand its distribution channels in recent years, we expect that each CapEx component will increase in line with the historical average Capex as a percentage of revenue.

Regarding depreciation and amortization (D&A), we assumed that it will grow following the historical average, respectively (Appendix 10).

### Net Working Capital (NWC)

The non-cash working capital of this company is composed by current asset items and current liability items. Since working capital includes all the items related to the operational activity of the company, we add the deferred income taxes and deferred income taxes to calculate NWC.

We assume that inventory, receivables, prepaid expenses, deferred income taxes, other current assets, accounts payable, deferred revenues, taxes payable and other current liabilities will be a stable proportion of the revenues along the past 3 years (Appendix 11).

## **Valuation Methodology**

To value Wuliangye Yibin, we follow the Discounted Cash Flow (DCF) approach. A Dividend Discount Model is not suitable since the dividend distribution is not constant across the past years. The company's capital structure is constant over year and the debt-to-equity rate was approximately 1% in 2017 (Appendix 9). Thus, we compute the equity value of Wuliangye Yibin through estimating the Free Cash Flow to Equity (FCFE) and using the FTE method.

### Discounted Cash Flow Valuation

We consider the valuation period of five years, from the base date 1 January 2018 to 31 December 2022. At the end of this period, we added a terminal value.

*Re:* Since we used the FCFE to forecast company's value, the discount rate should be the cost of equity, which represents the rate of return that

shareholders require for the company. We computed a cost of equity of 9.04%, applying the following formula:

$$Re = Rf + \beta * ERP$$

*Risk-free rate:* According to the Moody's rating (January 2018), Chinese sovereign credit rating is A1, which presents adjusted default spread of 0.72%. We added this rate to the yield to maturity of a 10-year Chinese government bond to get the risk-free rate. The value obtained was 4.35%.

*Beta:* We compute a regression between the monthly returns of Wuliangye Yibin's stock and the benchmark (SZSE COMP SUB IND) during the last five years. Then we compute the adjusted beta, which equals 0.795.

*Equity Risk Premium (ERP):* We consider as the market risk premium (MRP) of US the value of 5.08%, based on Damodaran's Database (2018). Then, we add the Country Risk Premium of China. In total, the ERP equals 5.89%.

*Cost of Debt (Rd):* We compute the average of historical interest coverage ratio of last three years, 521.17. Base on the Damodaran's Ratings, Spreads and Interest Coverage Ratios tables, the rating of company is AAA and the spread is 0.54%. We reach to the cost of debt of 5.70%, using the following equation:

$$Rd = Rf + \text{Country Risk Premium} + \text{Company Risk Premium}$$

*Effective tax rate:*

We compute the average of the last three years effective tax rate, 24.7%. Thus, we assume an average value for the tax rate of 24.7%.

*Terminal value:*

We considered that the perpetual growth rate (g) is affected by the Chinese GDP growth rate and inflation rate for the end of the forecasted period. Our expected perpetual growth rate is 3.5%.

### **Relative Valuation Approach (Multiple Valuation)**

To complement DCF approach, we present a price range for Wuliangye Yibin using the relative valuation method using the multiples P/E, P/B

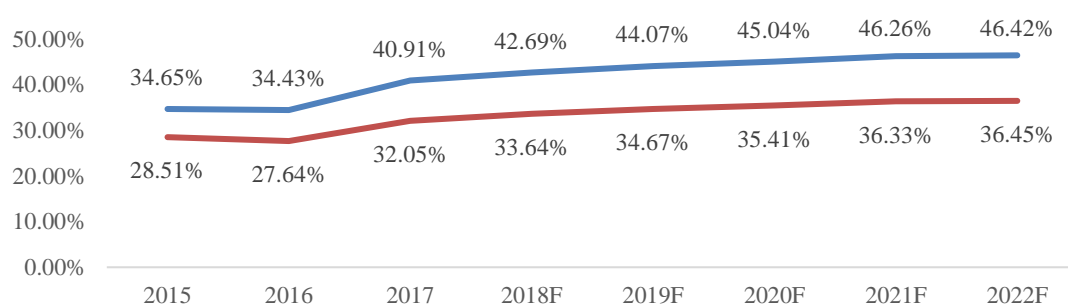
and P/Sales. To improve the multiples' accuracy, the multiples were adjusted for outliers to avoid selection bias. According to P/E ratio, the Wuliangye Yibin's share price equals CNY 72.08, representing a downside potential of 4.52%. For the P/B and P/Sales, we reach the price target of CNY 91.72 and CNY 68.45, respectively. Computing an average value of three multiples, we obtain a price target of CNY 77.41 with an upside potential of 2.55%, which supports our conclusion. With the multiples approach, our recommendation remains to Sell.

## 7. Financial Analysis

### EBIT margin & Net profit margin

Due to improvements in the sale channels, the sales cost in 2017 was CNY 3.63 billion, a YoY decrease of 22.77%. Therefore, there was an increase on EBIT margin by 6.48% YoY and Net Profit margin by 4.41% in 2017. We assume a sustained growth for the period between 2018 and 2022 (Figure 27). Along with the "Recruitment Program of Expert", we assume that production will be more efficient, supporting the upward tendency in EBIT & Net Profit margin from 2018F to 2022F. Nevertheless, payroll expense will continue to increase.

Figure 27: EBIT & Net Profit Margin



Source: Company Data, author

— EBIT Margin — Net Profit Margin

### ROE & ROA

Following the same reasons mentioned in the previous paragraph, the Return on Equity (ROE) increased by 3.73% YoY and the Return on Asset (ROA) increased 2.73% YoY in 2017. During 2018F to 2022F, we expect the revenue to grow at a slower pace, decreasing the total asset turnover. This presents a drop in efficiency. Moreover, the reduction of financial leverage accelerates a downward trend of ROE and ROA (Figure 28 and 29).

Figure 28: ROE & ROA

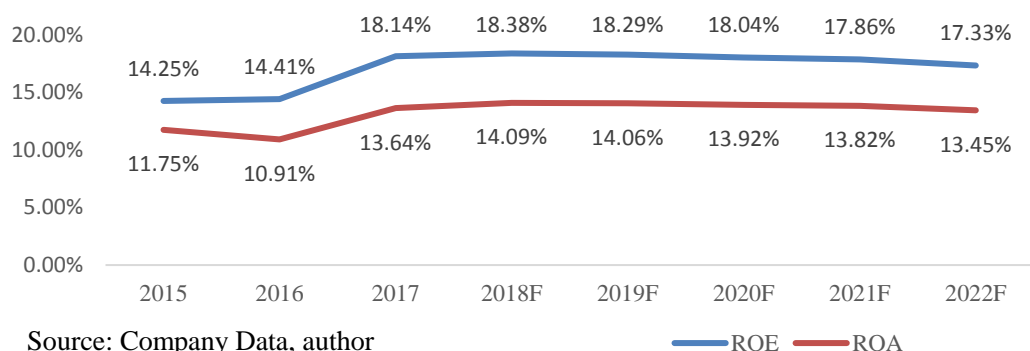
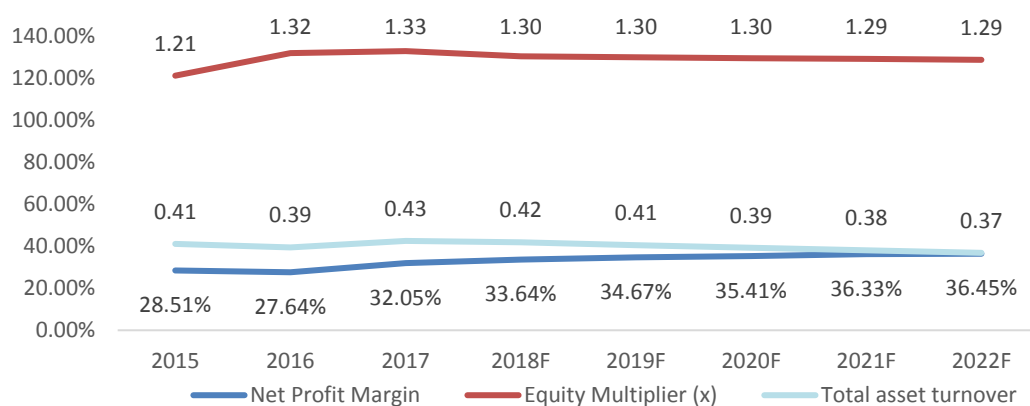


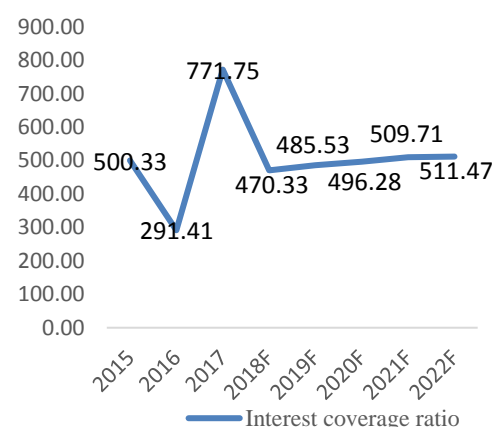
Figure 29: Net profit margin, Equity multiplier & Asset turnover



### Interest coverage ratio

This ratio represents the company's capacity to pay interests on outstanding debt. Since Wuliangye Yibin have a low value on outstanding debt, the interest coverage ratio maintains a high level, which indicates that the company is able to pay its debts (Figure 23).

Figure 30: Interest coverage ratio of Wuliangye Yibin



## 8. Investment Risk

### Operational Risks

#### Brand Reputation Risk (OR1)

Competition in the Baijiu industry, as a matter of fact, is based on brand awareness. A well-known brand has high pricing power, high profit margin, and high market shares. The image of the company and brand is very important for the businesses. Any bad news of product's quality or an inappropriate behavior of company's manager will cause a bad effect on the company's reputation. Then, we consider that there is a low/medium probability for this risk to occur, with a high impact for the company.

### Geographic location and Climatic Conditions (OR2)

The geographic location and the climatic conditions play an important role in product's quality. As mentioned before, Wuliangye Yibin's production site is one of the most suitable places for the fermentation for high-quality distilled liquor. However, Sichuan province is located on a seismic zone and in 2008 experienced a 7.8-magnitude earthquake. Due to possible unexpected earthquake and increase pollution of China, we consider that there is a low/medium probability for this risk to occur, with a high impact for the company.

### Supply Chain of Raw Materials Risk (OR3)

China is a big importer of a few agriculture products, such as sorghum. In 2017, the demand for sorghum in China was 8.9 million tons, of which 57% was imported and 94% of the imported volume came from the United States. The increased trade tensions might increase the price of sorghum, which will reduce the profit of the Baijiu industry. Thus, we consider that there is a high probability for this risk to occur, with a medium impact for the company.

### ***Economic and Market Risks***

#### GDP Growth (EMR1)

According to IMF, China's GDP growth rate will decelerate in the following years. Since Wuliangye Yibin is highly exposed to the Chinese market, lower consumption per capita will result in harm to company's operating activities. We consider that there is a medium/high probability for this risk to occur, with a high impact for the company.

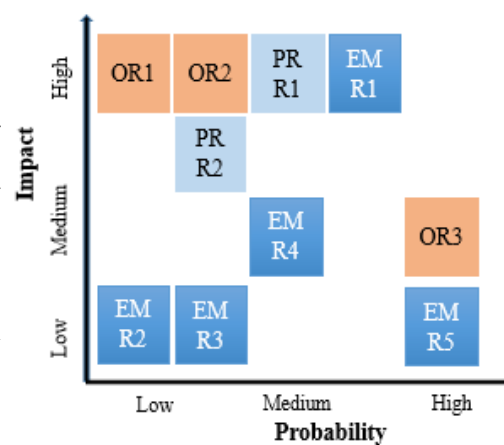
#### Interest Rate Risk (EMR2)

The financial leverage of Wuliangye Yibin is low. The company's business is mainly financed by equity instead of debt. In the Chinese capital market, the interest rate is expected to hold between 4.35% and 4.9%, adjusted to debt maturity. Therefore, we consider that there is a low probability for this risk to occur, with a low impact for the company.

#### Credit Risk (EMR3)

Credit risk is mainly related to account receivables. A large amount of bad

Figure 31: Risk Matrix



Source: Author



debt will result in a financial lost for the company. In the Baijiu industry, distributors and dealers usually choose to prepay for product to guarantee their supply. Therefore, between 2015 and 2017, the account receivables only accounted for 0.18% of total asset. We consider that there is a low/medium probability for this risk to occur, with a low impact for the company.

#### Industry Competitiveness (EMR4)

Baijiu industry is highly fragmented and probably the industry will host potential mergers and acquisitions. In 2016, mergers and acquisitions in Baijiu industry hit a peak with CNY 1.24 billion in deal. In 2017, it fell to CNY 0.27 billion, a sharp decline of 78.16%. However, according to the Baijiu industry analysis report, there is a continuous trend in following years that large companies will acquire smaller ones. In past, Wuliangye Yibin did not participate in any mergers and acquisitions, while other large Baijiu companies saw their competitive position strengthened by acquiring small companies. We believe that there is a medium probability for this risk to occur, with a medium impact for the company.

#### Exchange rate risks (EMR5)

Chinese currency is on depreciation trend. This will make imports of agriculture products more expensive. However, a slight increase on the price of some raw materials will not have huge impact on the company. Note that Wuliangye Yibin focus on the Chinese domestic market, therefore this will not affect the sales of the company. We believe that there is a medium/high probability for this risk to occur, with a low impact for the company.

### ***Political and Regulatory Risks***

#### Political regulatory and social risks (PRR1)

As mentioned previously, before 2013, the main consumers of Baijiu were business and government sectors. After the establishment of anti-corruption laws, the Baijiu sales sharply dropped. In addition, Wuliangye Yibin is a large state-owned company. Its corporate governance system reflects that the company is susceptible to political issues. In the future, there is uncertainty regarding government's regulation on the consumption of Baijiu. Thus, we believe that there is a

medium probability for this risk to occur, with a high impact for the company.

#### Tax policy (PRR2)

The government implemented a composite levying consumption tax on liquor enterprises. For the Baijiu companies, one part of the tax is based on price, 20% of the sales price and another is based on quantity, which means companies pay CNY 1 for each one-kilogram Baijiu product. Since May of 2017, the State Administration of Taxation strictly applied this law. In 2017, the tax revenue of all listed Baijiu companies was 54 billion, an increase of 24.48% YoY. In the future, according to the industry analysis report, it is expected that government will adjust tax policy in the Baijiu industry. We consider that there is a medium probability for this risk to occur, with a high impact for the company.

#### Risks to Price Target

We performed a sensitivity analysis to assess the impact of the main investment risks on Wuliangye Yibin's price target. These risks are inherent to the valuation model. We analyzed the following drivers: growth rate and cost of equity (Table 12).

Table 12: Sensitivity analysis

Changes in Growth Rate							
¥ 72.63	2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
Price	65.24	67.50	69.96	72.63	75.56	78.78	82.34
Change (%)	-10.18%	-7.07%	-3.69%		4.03%	8.47%	13.36%

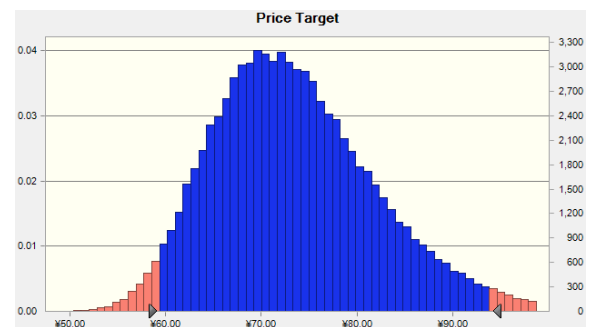
Changes in Cost of Equity							
¥ 72.63	8.25%	8.50%	8.75%	9.04%	9.25%	9.50%	9.75%
Price	84.76	80.51	76.66	72.63	69.97	67.04	64.34
Change (%)	16.70%	10.85%	5.55%		-3.67%	-7.71%	-11.42%

Source: Author

To complement the sensitivity analysis, we applied a Monte Carlo simulation. Wuliangye Yibin’s target price is highly influenced by four main factors: terminal growth rate, risk-free rate, equity risk premium, and productivity for grains to Baijiu. We assumed that all the input factors follow a normal distribution and a respective standard deviation of 0.57% for the terminal growth rates, of 0.5 for productivity, of 0.59% for equity risk premium, and of 0.44% for risk-free rate.

The Monte Carlo simulation average price target equals CNY 73.72, the median equals CNY 72.70 and the standard deviation equals CNY 8.94 (Figure 31). With a confidence level of 95%, the Wuliangye Yibin’s share price will be between CNY 59.27 and CNY 94.04, which supports our SELL recommendation.

Figure 32: Monte Carlo simulation



Source: Author, Oracle Crystal Ball

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Chinese Cereal Center - <http://www.cereal.com.cn/>

IMF (2017) World Economic Outlook

IMF (2018) World Economic Outlook

National Bureau of Statistics

Yahoo Finance - <https://finance.yahoo.com/>

## Appendix 1: Consolidated Balance Sheet

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Goodwill	2	2	2	2	2	2	2	2
Intangible assets	412	402	399	393	389	385	381	379
Gross property, plant and equipment	5904	5726	5566	5700	5709	5817	5969	6121
Other long-term assets	992	922	996	968	988	1014	1045	1081
Deferred income taxes	640	618	680	680	680	680	680	680
<b>Total non-current assets</b>	<b>7949</b>	<b>7670</b>	<b>7643</b>	<b>7743</b>	<b>7768</b>	<b>7897</b>	<b>8077</b>	<b>8263</b>
Inventories	8701	9257	10558	12350	13415	14563	15776	17055
Receivables	107	108	110	142	154	168	181	196
Prepaid expenses	332	272	198	361	392	425	461	498
Other current assets	9083	10202	11822	12413	13158	13816	14783	15670
Cash and cash equivalents	26374	34666	40592	45379	53019	61582	70951	81205
<b>Total current assets</b>	<b>44597</b>	<b>54505</b>	<b>63280</b>	<b>70646</b>	<b>80138</b>	<b>90554</b>	<b>102153</b>	<b>114624</b>
<b>Total assets</b>	<b>52547</b>	<b>62174</b>	<b>70923</b>	<b>78388</b>	<b>87906</b>	<b>98451</b>	<b>110230</b>	<b>122888</b>
<b>EQUITY</b>	<b>44346</b>	<b>48206</b>	<b>54674</b>	<b>61524</b>	<b>69250</b>	<b>77815</b>	<b>87334</b>	<b>97659</b>
Common stock	3796	3796	3796	3796	3796	3796	3796	3796
Additional paid-in capital	953	953	953	953	953	953	953	953
Retained earnings	38579	42327	48585	55322	62866	71228	80523	90604
Parent company's shareholders	43329	47077	53334	60071	67615	75977	85272	95353
Minority interest	1017	1129	1340	1453	1635	1838	2062	2306
<b>LIABILITIES</b>	<b>8201</b>	<b>13968</b>	<b>16248</b>	<b>16864</b>	<b>18656</b>	<b>20636</b>	<b>22896</b>	<b>25228</b>
Long-term Borrowings	0	0	0	0	0	0	0	0
Deferred revenues	227	281	280	283	286	289	292	295
<b>Total Non-Current Liabilities</b>	<b>227</b>	<b>281</b>	<b>280</b>	<b>283</b>	<b>286</b>	<b>289</b>	<b>292</b>	<b>295</b>
Accounts payable	1058	2171	3138	2640	2867	3113	3372	3646
Short-term Borrowings	206	327	630	478	519	564	611	660
Taxes payable	1042	1092	2645	2856	3209	3484	3984	4307
Other current liabilities	5661	10097	9556	10607	11774	13187	14637	16321
<b>Total Current Liabilities</b>	<b>7968</b>	<b>13687</b>	<b>15968</b>	<b>16581</b>	<b>18370</b>	<b>20347</b>	<b>22604</b>	<b>24933</b>
<b>Total liabilities and stockholders' equity</b>	<b>52547</b>	<b>62174</b>	<b>70923</b>	<b>78388</b>	<b>87906</b>	<b>98451</b>	<b>110230</b>	<b>122888</b>

## Appendix 2: Consolidated Income Statement

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Sales revenue	21659	24544	30187	32828	35657	38709	41935	45334
COGS	6672	7314	8450	9216	9875	10730	11532	12394
<b>Gross profit</b>	<b>14987</b>	<b>17230</b>	<b>21737</b>	<b>23612</b>	<b>25782</b>	<b>27979</b>	<b>30402</b>	<b>32939</b>
Sales, General and administrative	5697	6838	5894	6566	6775	6968	7129	7707
Other operating expenses	1785	1941	3495	3033	3295	3577	3875	4189
<b>Total operating expenses</b>	<b>7482</b>	<b>8779</b>	<b>9389</b>	<b>9599</b>	<b>10070</b>	<b>10544</b>	<b>11004</b>	<b>11896</b>
Interest Expense	15	29	16	30	32	35	38	41
Other income (expense)	796	916	1060	1195	1298	1409	1526	1650
Income before taxes	8287	9337	13392	15178	16978	18809	20887	22653
Provision for income taxes	1877	2281	3306	3749	4194	4646	5159	5595
Other income	0	0	0	0	0	0	0	0
<b>Net income from continuing operations</b>	<b>6410</b>	<b>7057</b>	<b>10086</b>	<b>11429</b>	<b>12784</b>	<b>14163</b>	<b>15728</b>	<b>17058</b>
Other	-234	-272	-412	-387	-421	-457	-495	-535
<b>Net income</b>	<b>6176</b>	<b>6785</b>	<b>9674</b>	<b>11042</b>	<b>12364</b>	<b>13706</b>	<b>15233</b>	<b>16523</b>
Attributable to:								
Equity shareholders of the parent company	6176	6785	9674	11042	12364	13706	15233	16523
EPS	1.63	1.79	2.55	2.91	3.26	3.61	4.01	4.35
Diluted EPS	1.63	1.79	2.55	2.91	3.26	3.61	4.01	4.35
<b>Weighted average shares outstanding</b>								
Basic	3796	3797	3797	3797	3797	3797	3797	3797
Diluted	3796	3797	3797	3797	3797	3797	3797	3797
EBIT	7505	8451	12348	14013	15712	17435	19399	21044

### Appendix 3: Common Size Consolidated Balance Sheet

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Goodwill	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Intangible assets	0.78%	0.65%	0.56%	0.50%	0.44%	0.39%	0.35%	0.31%
Gross property, plant and equipment	11.24%	9.21%	7.85%	6.66%	6.05%	5.60%	5.21%	4.86%
Other long-term assets	1.89%	1.48%	1.40%	1.23%	1.12%	1.03%	0.95%	0.88%
Deferred income taxes	1.22%	0.99%	0.96%	0.87%	0.77%	0.69%	0.62%	0.55%
<b>Total non-current assets</b>	<b>15.13%</b>	<b>12.34%</b>	<b>10.78%</b>	<b>9.27%</b>	<b>8.39%</b>	<b>7.71%</b>	<b>7.12%</b>	<b>6.60%</b>
Inventories	16.56%	14.89%	14.89%	15.76%	15.26%	14.79%	14.31%	13.88%
Receivables	0.20%	0.17%	0.16%	0.18%	0.18%	0.17%	0.16%	0.16%
Prepaid expenses	0.63%	0.44%	0.28%	0.46%	0.45%	0.43%	0.42%	0.41%
Other current assets	17.29%	16.41%	16.67%	15.84%	14.97%	14.03%	13.41%	12.75%
Cash and cash equivalents	50.19%	55.76%	57.23%	58.50%	60.76%	62.86%	64.57%	66.20%
<b>Total current assets</b>	<b>84.87%</b>	<b>87.67%</b>	<b>89.22%</b>	<b>90.73%</b>	<b>91.61%</b>	<b>92.29%</b>	<b>92.88%</b>	<b>93.40%</b>
<b>Total assets</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>EQUITY</b>	<b>84.39%</b>	<b>77.53%</b>	<b>77.09%</b>	<b>78.49%</b>	<b>78.78%</b>	<b>79.04%</b>	<b>79.23%</b>	<b>79.47%</b>
Common stock	7.22%	6.11%	5.35%	4.84%	4.32%	3.86%	3.44%	3.09%
Additional paid-in capital	1.81%	1.53%	1.34%	1.22%	1.08%	0.97%	0.86%	0.78%
Retained earnings	73.42%	68.08%	68.50%	70.57%	71.52%	72.35%	73.05%	73.73%
Parent company's shareholders	82.46%	75.72%	75.20%	76.63%	76.92%	77.17%	77.36%	77.59%
Minority interest	1.94%	1.82%	1.89%	1.85%	1.86%	1.87%	1.87%	1.88%
<b>LIABILITIES</b>	<b>15.61%</b>	<b>22.47%</b>	<b>22.91%</b>	<b>21.51%</b>	<b>21.22%</b>	<b>20.96%</b>	<b>20.77%</b>	<b>20.53%</b>
Long-term Borrowings	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred revenues	0.43%	0.45%	0.39%	0.36%	0.33%	0.29%	0.26%	0.24%
<b>Total Non-Current Liabilities</b>	<b>0.43%</b>	<b>0.45%</b>	<b>0.39%</b>	<b>0.36%</b>	<b>0.33%</b>	<b>0.29%</b>	<b>0.26%</b>	<b>0.24%</b>
Accounts payable	2.01%	3.49%	4.42%	3.37%	3.26%	3.16%	3.06%	2.97%
Short-term Borrowings	0.39%	0.53%	0.89%	0.61%	0.59%	0.57%	0.55%	0.54%
Taxes payable	1.98%	1.76%	3.73%	3.64%	3.65%	3.54%	3.61%	3.50%
Other current liabilities	10.77%	16.24%	13.47%	13.53%	13.39%	13.39%	13.28%	13.28%
<b>Total Current Liabilities</b>	<b>15.16%</b>	<b>22.01%</b>	<b>22.51%</b>	<b>21.15%</b>	<b>20.90%</b>	<b>20.67%</b>	<b>20.51%</b>	<b>20.29%</b>
<b>Total liabilities and stockholders' equity</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## Appendix 4: Common Size Consolidated Income Statement

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Sales revenue	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
COGS	30.80%	29.80%	27.99%	28.07%	27.69%	27.72%	27.50%	27.34%
<b>Gross profit</b>	<b>69.20%</b>	<b>70.20%</b>	<b>72.01%</b>	<b>71.93%</b>	<b>72.31%</b>	<b>72.28%</b>	<b>72.50%</b>	<b>72.66%</b>
Sales, General and administrative	26.30%	27.86%	19.52%	20.00%	19.00%	18.00%	17.00%	17.00%
Other operating expenses	8.24%	7.91%	11.58%	9.24%	9.24%	9.24%	9.24%	9.24%
<b>Total operating expenses</b>	<b>34.54%</b>	<b>35.77%</b>	<b>31.10%</b>	<b>29.24%</b>	<b>28.24%</b>	<b>27.24%</b>	<b>26.24%</b>	<b>26.24%</b>
Interest Expense	0.07%	0.12%	0.05%	0.09%	0.09%	0.09%	0.09%	0.09%
Other income (expense)	3.68%	3.73%	3.51%	3.64%	3.64%	3.64%	3.64%	3.64%
Income before taxes	38.26%	38.04%	44.36%	46.24%	47.61%	48.59%	49.81%	49.97%
Provision for income taxes	8.67%	9.29%	10.95%	11.42%	11.76%	12.00%	12.30%	12.34%
Other income	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Net income from continuing operations</b>	<b>29.60%</b>	<b>28.75%</b>	<b>33.41%</b>	<b>34.82%</b>	<b>35.85%</b>	<b>36.59%</b>	<b>37.51%</b>	<b>37.63%</b>
Other	-1.08%	-1.11%	-1.36%	-1.18%	-1.18%	-1.18%	-1.18%	-1.18%
<b>Net income</b>	<b>28.51%</b>	<b>27.64%</b>	<b>32.05%</b>	<b>33.64%</b>	<b>34.67%</b>	<b>35.41%</b>	<b>36.33%</b>	<b>36.45%</b>
Attributable to: Equity shareholders of the parent company	28.51%	27.64%	32.05%	33.64%	34.67%	35.41%	36.33%	36.45%



## **Appendix 5: Top investors**

### ***Yibin State-owned Assets Management Co., Ltd.***

Yibin State-owned Assets Management Co., Ltd. engages in capital and asset management in China. The company represents the municipal government on state-owned shares of municipal enterprises, as well as exercise the rights of shareholders. It also invests and raises funds for various construction projects, and manages state-owned assets, as well as engages in city economic development activities. The company was founded in 1999 and is based in Yibin City, China.

### ***Sichuan Yibin Wuliangye Group Co., Ltd.***

Sichuan Yibin Wuliangye Group Co., Ltd manages markets its own brand of Baijiu. The company is also engaged in marketing of plastic products and moulds, injection and pressure mould, as well as bio-engineering, medicine, printing, electronics, and logistics and transportation, etc.

### ***Hong Kong Securities Clearing Company Limited***

Hong Kong Securities Clearing Company Limited operates a clearing house for the Hong Kong exchange.

### ***China Securities Finance Corp., Ltd.***

China Securities Finance Co., Ltd., is a financial institution specialized in securities. It was jointly founded by Shanghai Stock Exchange, Shenzhen Stock Exchange and China Securities Depository and Clearing Corporation Limited. Its business activities include loan services that provide funds and securities for margin transactions, raise funds and securities to facilitate such services, and other businesses approved by CSRC.

### ***Central Huijin Investment Co., Ltd.***

Central Huijin Investment Co., Ltd. is a Chinese investment company owned by the government of the People's Republic of China. Established in 2003, it became a wholly owned subsidiary of China Investment Corporation, with its own Board of Directors and Board of Supervisors. Central Huijin's principal shareholder rights are exercised on behalf of the State Council.

## Appendix 6: Assumptions

INCOME STATEMENT	Notes	2018F	2019F	2020F	2021F	2022F	Assumption
<b>Revenue</b>							See "Revenues"
Plastic package	YoY	6.60%	6.40%	6.30%	6.00%	5.70%	
Printing	YoY	6.60%	6.40%	6.30%	6.00%	5.70%	
Glass	YoY	6.60%	6.40%	6.30%	6.00%	5.70%	
Others	YoY	6.60%	6.40%	6.30%	6.00%	5.70%	
<b>COGS</b>							See "Revenues"
SG&A	% Rev	20.00%	19.00%	18.00%	17.00%	17.00%	
Other operating expenses	% Rev	9.24%	9.24%	9.24%	9.24%	9.24%	Average 2015-2017
Interest Expense	%	6.23%	6.23%	6.23%	6.23%	6.23%	Average 2015-2018
Other income (expense)	% Rev	3.64%	3.64%	3.64%	3.64%	3.64%	Average 2015-2017
Other	% Rev	-1.18%	-1.18%	-1.18%	-1.18%	-1.18%	Average 2015-2018
Tax rate		24.70%	24.70%	24.70%	24.70%	24.70%	Average 2015-2017

BALANCE SHEET	Notes	2018F	2019F	2020F	2021F	2022F	Assumption
Goodwill	%	0.00%	0.00%	0.00%	0.00%	0.00%	Equal to 2017YE carrying amount.
Intangible assets							
Gross PP&E							Based on CapEx
Other long-term assets							
Deferred income taxes	%	0.00%	0.00%	0.00%	0.00%	0.00%	
Inventories	% Rev	37.62%	37.62%	37.62%	37.62%	37.62%	.
Receivables	% Rev	0.43%	0.43%	0.43%	0.43%	0.43%	
Prepaid expense	% Rev	1.10%	1.10%	1.10%	1.10%	1.10%	
Other current assets	CAGR	5.0%	6.0%	5.0%	7.0%	6.0%	
Common stock		0.00%	0.00%	0.00%	0.00%	0.00%	No new issued of capital
Deferred revenue	% Rev	1.04%	1.04%	1.04%	1.04%	1.04%	
Accounts payables	% Rev	8.04%	8.04%	8.04%	8.04%	8.04%	
Short-term borrowings	% Rev	1.46%	1.46%	1.46%	1.46%	1.46%	
Tax payable	% Rev	8.70%	9.00%	9.00%	9.50%	9.50%	
Other current Liability.	CAGR	11.0%	11.0%	12.0%	11.0%	11.5%	
Minority interest	% Parent company's shareholders	2.4%	2.4%	2.4%	2.4%	2.4%	

CASH FLOW STATEMENT	Notes	2018F	2019F	2020F	2021F	2022F
Investments losses (gains)	% Rev	-0.18%	-0.18%	-0.18%	-0.18%	-0.18%
Deferred income taxes	% Rev	-0.25%	-0.25%	-0.25%	-0.25%	-0.25%
Others	YoY	3.00%	3.00%	3.00%	3.00%	3.00%
Investments in PP&E	% Rev	-1.26%	-1.26%	-1.26%	-1.26%	-1.26%
PP&E reductions	% Rev	0.02%	0.02%	0.02%	0.02%	0.02%
Dividend paid	% NI	-38.99%	-38.99%	-38.99%	-38.99%	-38.99%
Other financing activities	% Rev	-0.69%	-0.69%	-0.69%	-0.69%	-0.69%

CapEx	Notes	2018F	2019F	2020F	2021F	2022F
Depreciations rate	%	9.47%	9.47%	9.47%	9.47%	9.47%
Amortizations rate - Other long-term assets	%	5.02%	5.02%	5.02%	5.02%	5.02%
Amortizations rate - intangible assets	%	3.24%	3.24%	3.24%	3.24%	3.24%
New investment - PP&E	% Rev	0.37%	0.37%	0.37%	0.37%	0.37%
New investment - CIP	% Rev	0.57%	0.57%	0.57%	0.57%	0.57%
New investment - Other long-term assets	% Rev	0.20%	0.20%	0.20%	0.20%	0.20%
New investment - Intangible assets	% Rev	0.02%	0.02%	0.02%	0.02%	0.02%
CIP transferred into PP&E	%	67.10%	67.10%	67.10%	67.10%	67.10%
Sell - PP&E	%	1.65%	1.65%	1.65%	1.65%	1.65%
DEP reduction	% Rev	0.38%	0.38%	0.38%	0.38%	0.38%
Sell - CIP	%	35.43%	35.43%	35.43%	35.43%	35.43%
Sell - Other long-term assets	%	-0.21%	-0.21%	-0.21%	-0.21%	-0.21%

## Appendix 7: Revenue Assumptions

Revenue	2017	2018F	2019F	2020F	2021F	2022F
<b>Total sale quantity ton</b>	<b>180,007</b>	<b>186,567</b>	<b>193,332</b>	<b>200,338</b>	<b>207,513</b>	<b>214,850</b>
<b>Baijiu High-end</b>	21,394,000,000	23,490,184,120	25,743,362,581	28,186,150,256	30,773,638,850	33,503,568,352
Ave. price per bottle (500ml)	332.06	342	352	363	374	385
Ave. price per ton	664,120	684,044	704,565	725,702	747,473	769,897
Quantity ton	32,214	34,340	36,538	38,840	41,170	43,517
<b>Baijiu mid &amp; low-end</b>	6,698,000,000	7,105,908,200	7,538,658,009	7,997,762,282	8,484,826,005	9,001,551,909
Ave. price	22.66	23	24	25	26	26
Ave. price per ton	45,320	46,680	48,080	49,522	51,008	52,538
Quantity ton	147,793	152,227	156,794	161,498	166,343	171,333
Plastic package	1,794,000,000	1,912,404,000	2,034,797,856	2,162,990,121	2,292,769,528	2,423,457,391
Printing	41,000,000	43,706,000	46,503,184	49,432,885	52,398,858	55,385,593
Glass	64,000,000	68,224,000	72,590,336	77,163,527	81,793,339	86,455,559
Others	195,000,000	207,870,000	221,173,680	235,107,622	249,214,079	263,419,282
Total Revenue	30,187,000,000	32,828,296,320	35,657,085,646	38,708,606,693	41,934,640,659	45,333,838,085
<b>Total Revenue (m)</b>	<b>30,187</b>	<b>32,828</b>	<b>35,657</b>	<b>38,709</b>	<b>41,935</b>	<b>45,334</b>

## Appendix 8: COGS Assumptions

	2017	2018F	2019F	2020F	2021F	2022F
Raw material	Price Adj. to component					
Sorghum	817	899	988	1,087	1,196	1,316
Rice	1,632	1,747	1,869	2,000	2,140	2,290
Sticky rice	1,660	1,776	1,900	2,033	2,176	2,328
Wheat	342	366	392	419	449	480
Corn	378	404	432	463	495	530
Ave. price grain/ton (yuan)	4,829	5,192	5,582	6,002	6,455	6,943
Ton grain/ton liquor (rate)	5.0	5.0	4.9	4.9	4.8	4.7
Price of Raw material/ton (yuan)	24,145	25,958	27,351	29,411	30,984	32,631
<b>Total raw material cost</b>	<b>4,346,287,016</b>	<b>4,842,877,596</b>	<b>5,287,904,947</b>	<b>5,892,194,953</b>	<b>6,429,670,246</b>	<b>7,010,826,509</b>
Wages	2,242,000,000	2,354,100,000	2,495,346,000	2,670,020,220	2,856,921,635	3,056,906,150
Energy	777,000,000	800,310,000	824,319,300	849,048,879	874,520,345	900,755,956
Manufacturing expenses	1,172,000,000	1,218,880,000	1,267,635,200	1,318,340,608	1,371,074,232	1,425,917,202
Total Cost	8,537,287,016	9,216,167,596	9,875,205,447	10,729,604,660	11,532,186,459	12,394,405,816
<b>Total Cost (m)</b>	<b>8,537</b>	<b>9,216</b>	<b>9,875</b>	<b>10,730</b>	<b>11,532</b>	<b>12,394</b>
Gross profit margin	71.72%	71.93%	72.31%	72.28%	72.50%	72.66%

## Appendix 9: Key Ratios

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
<b>Liquidity Ratios</b>								
Current Ratio (x)	5.60	3.98	3.96	4.29	4.38	4.47	4.53	4.60
Quick Ratio (x)	4.51	3.31	3.30	3.54	3.65	3.75	3.83	3.92
Cash Ratio (x)	3.31	2.53	2.54	2.77	2.91	3.04	3.15	3.26
<b>Efficiency Ratios</b>								
Total Assets Turnover (x)	0.41	0.39	0.43	0.42	0.41	0.39	0.38	0.37
Accounts Receivables Turnover (x)	202.42	227.26	274.43	231.05	231.05	231.05	231.05	231.05
Collection Period (days)	1.80	1.61	1.33	1.58	1.58	1.58	1.58	1.58
Inventory Turnover (x)	0.77	0.79	0.80	0.75	0.74	0.74	0.73	0.73
Days in Inventory (days)	476.00	461.96	456.06	489.13	495.82	495.39	499.33	502.25
Payables Turnover (x)	6.88	3.91	3.48	5.10	5.30	5.53	5.70	5.86
Payables Period (days)	53.03	93.45	104.92	71.51	68.86	66.05	64.05	62.30
Operating Cycle (days)	477.80	463.57	457.39	490.71	497.40	496.97	500.91	503.83
Cash Cycle (days)	424.77	370.12	352.47	419.20	428.54	430.92	436.86	441.53
Fixed Assets Turnover	3.14	3.69	4.60	5.30	5.65	5.93	6.18	6.43
<b>Profitability Ratios</b>								
Gross Profit Margin (%)	69.20%	70.20%	72.01%	71.93%	72.31%	72.28%	72.50%	72.66%
EBIT Margin (%)	34.65%	34.43%	40.91%	42.69%	44.07%	45.04%	46.26%	46.42%
Net Profit Margin (%)	28.51%	27.64%	32.05%	33.64%	34.67%	35.41%	36.33%	36.45%
ROA (%)	11.75%	10.91%	13.64%	14.09%	14.06%	13.92%	13.82%	13.45%
ROCE (%)	16.84%	17.43%	22.47%	22.67%	22.60%	22.32%	22.14%	21.48%
ROE (%)	14.25%	14.41%	18.14%	18.38%	18.29%	18.04%	17.86%	17.33%
EPS (x)	1.63	1.79	2.55	2.91	3.26	3.61	4.01	4.35
SG&A/Sale (%)	26.30%	27.86%	19.52%	20.00%	19.00%	18.00%	17.00%	17.00%
<b>Solvency Ratios</b>								
Long- and short-term Debt Ratio (%)	0.39%	0.53%	0.89%	0.61%	0.59%	0.57%	0.55%	0.54%
Long-term Debt Ratio (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Debt to Equity Ratio (x)	0.46%	0.68%	1.15%	0.78%	0.75%	0.72%	0.70%	0.68%
Equity Multiplier (x)	1.21	1.32	1.33	1.30	1.30	1.30	1.29	1.29
Interest Coverage Ratio (x)	500.33	291.41	771.75	470.33	485.53	496.28	509.71	511.47
<b>Value Creation and Cash Flow Ratios</b>								
Debt Coverage	32.48	35.77	15.50	21.26	25.07	25.77	26.18	26.42
Cash to Income	0.31	0.48	0.32	0.31	0.37	0.38	0.38	0.38

## Appendix 10: CapEx

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
<b>1- Gross PP&amp;E</b>								
<b>Initial - total</b>	<b>6061</b>	<b>5904</b>	<b>5726</b>	<b>5566</b>	<b>5700</b>	<b>5709</b>	<b>5817</b>	<b>5969</b>
<b>1)- Initial - PP&amp;E</b>	<b>5676</b>	<b>5348</b>	<b>5431</b>	<b>5293</b>	<b>5303</b>	<b>5251</b>	<b>5302</b>	<b>5399</b>
DEP	571	514	475	501	502	497	502	511
CIP transferred into PP&E	168	512	193	183	266	307	345	382
New investment - PP&E	79	102	97	121	131	142	154	166
Sell - PP&E	37	182	49	37	88	49	60	89
DEP reduction	33	165	96	245	141	147	160	150
<b>Final - PP&amp;E</b>	<b>5348</b>	<b>5431</b>	<b>5293</b>	<b>5303</b>	<b>5251</b>	<b>5302</b>	<b>5399</b>	<b>5497</b>
<b>2)- Initial - Construction-in-Progress</b>	<b>385</b>	<b>555</b>	<b>295</b>	<b>273</b>	<b>397</b>	<b>458</b>	<b>515</b>	<b>570</b>
New investment - CIP	242	109	41	186	202	219	237	256
Sell - CIP	71	369	63	62	141	162	182	202
<b>Final - CIP</b>	<b>556</b>	<b>295</b>	<b>273</b>	<b>397</b>	<b>458</b>	<b>515</b>	<b>570</b>	<b>624</b>
<b>Final - Total</b>	<b>5904</b>	<b>5726</b>	<b>5566</b>	<b>5700</b>	<b>5709</b>	<b>5817</b>	<b>5969</b>	<b>6121</b>
<b>2- Other long-term assets</b>								
<b>Initial</b>	<b>922</b>	<b>992</b>	<b>922</b>	<b>996</b>	<b>968</b>	<b>988</b>	<b>1014</b>	<b>1045</b>
Amortization	35	46	61	50	49	50	51	52
New investment - Other long-term assets	71	92	67	66	71	77	84	91
Sell - Other long-term assets	34	-116	68	-44	-2	-2	-2	-2
<b>Final</b>	<b>992</b>	<b>922</b>	<b>996</b>	<b>968</b>	<b>988</b>	<b>1014</b>	<b>1045</b>	<b>1081</b>
<b>3- Intangible assets</b>								
<b>Initial</b>	<b>422</b>	<b>412</b>	<b>402</b>	<b>399</b>	<b>393</b>	<b>389</b>	<b>385</b>	<b>381</b>
Amortization	13	13	14	13	13	13	12	12
New investment - Intangible assets	3	4	11	7	8	9	9	10
<b>Final</b>	<b>412</b>	<b>402</b>	<b>399</b>	<b>393</b>	<b>389</b>	<b>385</b>	<b>381</b>	<b>379</b>

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Depreciations	571	514	475	501	502	497	502	511
Amortizations - intangible assets	13	13	14	13	13	13	12	12
Amortizations - other long-term assets	35	46	61	50	49	50	51	52
<b>D&amp;A</b>	<b>619</b>	<b>573</b>	<b>550</b>	<b>564</b>	<b>564</b>	<b>560</b>	<b>566</b>	<b>576</b>
<b>CAPEX</b>	<b>395</b>	<b>307</b>	<b>216</b>	<b>379</b>	<b>412</b>	<b>447</b>	<b>484</b>	<b>524</b>

## Appendix 11: Net Working Capital (NWC)

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
<b>Current Assets</b>	<b>18863</b>	<b>20457</b>	<b>23368</b>	<b>25946</b>	<b>27799</b>	<b>29651</b>	<b>31882</b>	<b>34099</b>
Inventories	8701	9257	10558	12350	13415	14563	15776	17055
Receivables	107	108	110	142	154	168	181	196
Prepaid expenses	332	272	198	361	392	425	461	498
Deferred income taxes	640	618	680	680	680	680	680	680
Other current assets	9083	10202	11822	12413	13158	13816	14783	15670
<b>Current Liabilities</b>	<b>7968</b>	<b>13687</b>	<b>15968</b>	<b>16383</b>	<b>18472</b>	<b>20434</b>	<b>22885</b>	<b>25214</b>
Accounts payable	1058	2171	3138	2640	3209	3484	3984	4307
Deferred revenues	227	281	280	280	280	280	280	280
Taxes payable	1042	1092	2645	2856	3209	3484	3984	4307
Other current liabilities	5661	10097	9556	10607	11774	13187	14637	16321
NWC	10895	6770	7400	9563	9327	9217	8997	8885
<b>Change of NWC</b>	<b>192</b>	<b>-4070</b>	<b>742</b>	<b>2163</b>	<b>-237</b>	<b>-109</b>	<b>-220</b>	<b>-111</b>



## Appendix 12: Discounted Cash Flow Valuation Method

FCFE	2018F	2019F	2020F	2021F	2022F
Net income	11429	12784	14163	15728	17058
D&A	564	564	560	566	576
Net increase in NWC	2163	-237	-109	-220	-111
CAPEX	379	412	447	484	576
Net increase in Debt	-152	41	44	47	50
FCFE	9299	13214	14429	16077	17218

Equity Value	
Terminal growth rate	3.5%
Cost of equity	9.04%
Terminal value	321,679
PV of terminal value	227,552
NPV of FCFF	53,314
Value of equity	280,866
Value of equity net of minority interest	275,641
No. of shares outstanding	3795
Equity Value per share	72.63
Price target	<b>¥ 72.63</b>
Current price 2018.3.8	¥ 75.49
Upside potential	3.78%

## Appendix 13: Multiples Method

	P/E	P/B	Price/Sales
Wuliangye	21.04	4.56	8.29
Yanghe Gufen	25.29	6.27	9.6
Luzhou Laojiao	22.66	4.49	6.77
Gujing Gongjiu	27.71	6.09	6.08
Kouzijiao	23.48	5.78	9.2
Average	24.79	5.66	7.91
Target price	¥ 72.08	¥ 91.72	¥ 68.45
Current price 2018.9.5	¥ 75.49		
Upside potential	-4.52%	21.50%	-9.33%
<b>Average Target price</b>	<b>¥ 77.41</b>		
Upside potential	2.55%		

## Appendix 14: Peer Group

Company Name	Recent Price (CNY)	Market Cap (CNY bn)	Price/Earnings	Type	Peer
Wuliangye Yibin	74.19	211.3	21.4	H/M/L	
Kweichow Maotai	738.56	592.7	31.49	H	✘
Yanghe Gufen	134.11	130.8	25.29	H/M/L	✓
Luzhou Laojiao	56.20	79.9	22.66	H/M/L	✓
Shanxi Fenjiu	61.57	30.0	44.93	M/L	✘
Gujing Gongjiu	95.09	25.7	27.71	M/L	✓
Kouzijiao	56.83	23.3	23.48	M/L	✓
Jinshiyuan	20.27	16.6	24.96	M/L	✘
*H: High-end Baijiu    M: Mid-end Baijiu    L: Low-end Baijiu					
Source: China industry information, author					

## Appendix 15: Sensitivity Analysis

	Investment Rating and Risk Classification		
	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%<	> 0% and 15%<
Sell	< - 10%	< - 10%	< 0%

Source: BPI

		Change in Terminal growth Value						
		2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
Change in Cost of Equity	¥ 72.63							
	8.25%	74.68	77.72	81.07	84.76	88.87	93.45	98.62
	8.50%	71.42	74.17	77.19	80.51	84.18	88.26	92.81
	8.75%	68.42	70.93	73.67	76.66	79.96	83.60	87.65
	9.04%	65.24	67.50	69.96	72.63	75.56	78.78	82.34
	9.25%	63.11	65.22	67.49	69.97	72.67	75.62	78.87
	9.50%	60.75	62.69	64.77	67.04	69.49	72.17	75.11
	9.75%	58.56	60.34	62.26	64.34	66.58	69.02	71.69

		Change in Terminal growth Value						
		2.75%	3.00%	3.25%	3.50%	3.75%	4.00%	4.25%
Change in Cost of Equity	¥ 72.63							
	8.25%	-1.07%	2.96%	7.39%	12.28%	17.72%	23.80%	30.64%
	8.50%	-5.40%	-1.75%	2.25%	6.65%	11.51%	16.91%	22.95%
	8.75%	-9.37%	-6.04%	-2.42%	1.55%	5.92%	10.75%	16.11%
	9.04%	-13.58%	-10.58%	-7.33%	-3.78%	0.00%	4.36%	9.07%
	9.25%	-16.39%	-13.61%	-10.59%	-7.32%	-3.74%	0.18%	4.48%
	9.50%	-19.52%	-16.96%	-14.19%	-11.20%	-7.94%	-4.39%	-0.50%
	9.75%	-22.42%	-20.06%	-17.52%	-14.77%	-11.80%	-8.57%	-5.04%

Source: Author