

**MASTER OF SCIENCE IN
FINANCE**

**MASTERS FINAL WORK
PROJECT**

EQUITY RESEARCH:
KWEICHOW MOUTAI CO., LTD

LI CHENXUE

SUPERVISOR:
PROF. DOUROR JOAO CARVALHO DAS NEVES

OCTOBER 2018

Abstract

This report encompasses a valuation of the Kweichow Moutai Co., Ltd elaborated as a Master's of Finance Final Work Project at ISEG – University of Lisbon. This work follows the format recommended by the CFA Institute. To conduct this research, we considered publicly available data on June 29th, 2018, collected from various sources, such as company reports and Bloomberg L.P., among others. Therefore, events after this date are not reflected in this analysis.

There are three reasons why we decided to analyse the liquor industry in Chinese market and the Kweichow Moutai Co., Ltd. First of all, China as a developing country located in Asia has a rapid and stable increase economy. China contributes about 15% to global GDP. There is no doubt that China is a huge potential market. Secondly, the liquor market has expanded, and the growth of baijiu industry remains increasing. Finally, the Kweichow Moutai Co., Ltd as the top brand in the market has an important position, at the same time, it's transforming itself into a global luxury baijiu giant.

To reach a recommendation, we used DCF model to value the equity of the firm, as well as a multiples analysis to complement the previous model. With a price target of Rmb744.19 for YE18 and a upside potential of 1.74% from the current price of Rmb731.46, our final recommendation for the Kweichow Moutai Co., Ltd (600519 CH) is "Hold".

JEL classification: G10; G32; G34;

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

Resumo

Este relatório engloba uma avaliação da Kweichow Moutai Co., Ltd elaborada como Projecto de Trabalho Final de Mestrado em Finanças no ISEG - Universidade de Lisboa. Este trabalho segue o formato recomendado pelo Instituto CFA. Para realizar esta pesquisa, consideramos dados públicos disponíveis em 29 de junho de 2018, coletados de várias fontes, como relatórios de empresas e Bloomberg L.P., entre outros. Portanto, eventos após essa data não são refletidos nessa análise.

Há três razões pelas quais decidimos analisar a indústria de alcoólatra no mercado chinês e a Kweichow Moutai Co., Ltd. Em primeiro lugar, a China, como um país em desenvolvimento localizado na Ásia, tem uma economia de crescimento rápida e estável. A China contribui com cerca de 15% para o PIB global. Não há dúvida de que a China é um enorme mercado potencial. Em segundo lugar, o mercado de alcoólatras estagnou e o crescimento da indústria de baijiu continua aumentando. Finalmente, a Kweichow Moutai Co., Ltd como a principal marca do mercado tem uma posição importante, ao mesmo tempo, está tornar-se num gigante global de baijiu de luxo.

Para chegar a nossa recomendação, usamos o modelo DCF para avaliar o patrimônio da empresa, bem como uma análise múltiplos para complementar o modelo anterior. Com uma tornar preço de Rmb 744,19 para o YE18 e um upside potencial de 1,74% do preço atual de Rmb731,46, nossa recomendação final para a Kweichow Moutai Co., Ltd (600519 CH) é “Hold”.

Classificação JEL: G10 ; G32; G34

Palavras-Chave: Equity Research; Avaliação de Empresas; Indústria chinesa de licores; Premium de Alta Qualidade Baijiu

Acknowledgements

This is an undertaking that would not be possible without the support of several people.

To my family, especially my parents and sister, that supported me throughout my educational and now professional paths.

To my professors, for all the dedication and knowledge they have shared with me, specially professor Clara Raposo and project supervisor João Carvalho das Neves, for his unconditional support and guidance over the last months. Last but not least, to my friends and colleagues for making this an enjoyable journey.

Thank you !

Index

Abstract	i
Resumo	ii
Acknowledgements	iii
Index	iv
List of Figures	v
List of Tables	vi
1. Research Snapshot	1
2. Business Description	2
3. Management and Corporate Governance & Social Responsibility	4
4. Industry Overview and Competitive Positioning	5
5. Investment Summary	11
6. Valuation	12
7. Financial Analysis	15
8. Sensitivity Analysis	16
9. Monte Carlos Simulation	17
10. Investment Risks	17
Appendices	19
Appendix 1: Statement of Financial Position	19
Appendix 2: Common-Size Statement of Balance sheet Income Statement	20
Appendix 3: Income Statement Cash Flow Statement	21
Appendix 4: Common-Size Statement of Income Statement Key Financial Ratios	22
Appendix 5: Cash Flow Statement	23
Appendix 6: Calculation of D&A and Net Working Capital	24
Appendix 7: Forecasting Assumptions-Income statement	25
Appendix 8: Forecasting Assumptions-Balance sheet	26
Appendix 9: Key Ratios	27
Appendix 10: Discounted Cash Flow Analysis	28
Appendix 11: Monte Carlo Simulation	29
Appendix 12: Ownership Structure	30
Appendix 13: Corporate Governance	31
Appendix 14: Risk Matrix	32
Appendix 15: International Rewards	33
Appendix 16: Moutai Processing Steps &Product Range	34
References	35
Abbreviations	36

List of Figures

Figure 1: Historical Share Price	1
Figure 2: Monte Carlos Simulation	2
Figure 3: Moutai Revenue by Products 2017	2
Figure 4: Consumer Breakdown on Moutai's E-com Platform	3
Figure 5: Market Overseas Revenue	4
Figure 6: Moutai Sales by Regine, 2017	4
Figure 7: Moutai Overseas Income Shares	4
Figure 8: Top Ten Shareholders Percentage	5
Figure 9: Industry Baijiu Total Production	5
Figure 10: Baijiu Industry Sales	6
Figure 11: High-Premium Moutai Sprints Market Improvement	6
Figure 12: 2017 Mainly High-premium Baijiu Brand Revenue Growth	7
Figure 13: Chinese GDP Growth	7
Figure 14: Income of Urban Residents and Rural Residence	7
Figure 15: McKinsey's Prediction of China's Demographic Level	7
Figure 16: The Economist Predicts the Development of China's Middle Class	7
Figure 17: Engel Coefficient in China 1978-2014	8
Figure 18: Business Consumption and Personal Consumption Contribute to Major Consumer Demand	8
Figure 19: Baijiu Product Position Structure	8
Figure 20: 2016 Gross Profit Contribution for Luxury Baijiu Company	9
Figure 21: Porter's 5 Forces	10
Figure 22: Growth margin and net income margin	15
Figure 23: Selling & Marketing Expense and Percentage to Revenue 2013~2017	15
Figure 24: Active Ratios 2013~2017	15
Figure 25: Cash Flow Edges Up 2013~2017	15
Figure 26: Monte Carlo Distribution	17
Figure 27: Risk Matrix	17

List of Tables

Table 1 Analyst's Risk Assessment	1
Table 2 Market Data	1
Table 3 Kweichow Moutai Target Price	1
Table 4 Kweichow Moutai Key Financial Ratios	1
Table 5 Kweichow Moutai's Valuation Sensitivity Analysis	2
Table 6 Kweichow Moutai 's Brief Profile	2
Table 7 Brand Finance 2017 Global Liquor Brand Value	2
Table 8 Moutai's complex production process limits capacity expansion	3
Table 9 Moutai's complex production process limits capacity expansion	4
Table 10 Kweichow Moutai Top 10 Shareholders and their Stakes in the Company	5
Table 11 Poverty Alleviation	5
Table 12 China's Baijiu Industry Price List	6
Table 13 Baijiu Industry Structure	10
Table 14 Swot Analysis	11
Table 15 Multiple Valuation Result	12
Table 16 WACC Calculation	14
Table 17 Peers' Selection	15
Table 18 Baijiu Industry Peer Group Multiples , 2018	15
Table 19 Margin and Return Comparation	15
Table 20 Mutiple Valuation (EV/EBITDA)	15
Table 21 Mutiple valuation(P/E)	16
Table 22 Raw Material Purchase	16
Table 23 Key Ratios Industry Ranking	17
Table 24 Dupont Analysis	17
Table 25 Investmet Ratings According Risks	17
Table 26 Kweichow Moutai's Valuation Sensitivity Analysis	18

Kweichow Moutai: The High-end Liquor Leader in the Chinese Baijiu Industry

(YE2018 Price Target of Rmb744.19(1.74%+); recommendation is to Hold)

1. Research Snapshot

Hold is our recommendation for Kweichow Moutai Co., Ltd. with a price target of Rmb744.19 on June 29 in 2018 (Table 3). This offers a potential 1.74% upside gain from its latest closing price of Rmb731.46 with low risk (Table 1), using the discounted cash flow method. Relative valuation through multiples supports our view that Kweichow Moutai is currently valued with a right amount of price. With multiple approach we conclude that Kweichow Moutai is undervalued when comparing to its peers by 1.33%.

Figure 1: Historical Share Price



Source: Bloomberg & Author

The target price is computed using the DCF approach as the main model. To verify this recommendation, we use multiple methodology by selecting the representative multiples Enterprise Value to EBITDA (EV/EBITDA) and P/E (Price to Earnings Ratio). The multiple method is in line with the DCF (Discounted Cash Flow) recommendation. Consequently, in our view, this model represents the least reliable price estimation.

Highlight:

Moutai makes the strong brand difficult to compete with in the high-end liquor competition. After the industry adjustment in 2015, Moutai achieved a smooth over-sale. From 2012 to 2017, Moutai's market share in the high-end market increased from 33% to 54%, accounting for half of the industry. The status of high-end liquor leaders is difficult to shake.

- Kweichow Moutai has a super-high profit margin 92% which relies on their unique and non-replicated products, Moutai sprits (Table 4). The superior quality of Moutai comes from a unique geographical climate with complicated processing. However, the limited producing situation make the company difficult in production expansion as well.
- The rise of private consumption has successfully achieved a replacement for political consumption.

Table 1 Analyst's Risk Assessment

High	Medium	Low
		Low

Our risk assessment reflects leading position in the industry as well as its stable and sustainable ability to generate cash...

Table 2 Market Data

Market Profile	
Closing Price (Rmb)	731.46
52-Week Price Range(Rmb)	478.83-792.26
Average Daily Volume (mn)	4.30
Shares outstanding(mn)	1256.20
Market Cap (bn)	Rmb915
P/E	26.41
Business sector	Food & Beverages

Source: Dongfangcaifu

Table 3 Kweichow Moutai Target Price

DCF	744.19
Multiples (average)	733.66
EV/EBITDA	726.17
P/E	741.15

Source: Author

Table 4 Kweichow Moutai Key Financial Ratios

	2017A	2018E	2019E	2020E
Revenue	52,659	68,919	78,295	89,461
YoY	56.5%	30.8%	13.6%	14.2%
Growth profit	46,583	60,811	69,118	79,016
YoY	54.6%	30.5%	13.6%	14.3%
EPS	21.56	27.22	30.90	35.64
PE	32.35	27.33	19.19	20.40

Source: Bloomberg & Author

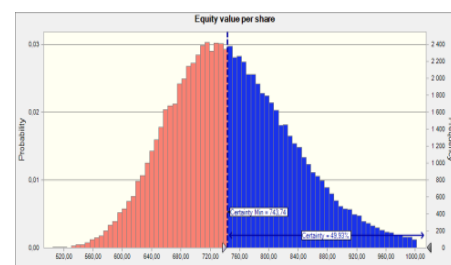
Risk: Alcohol consumption regulation; Food safety risks

Table 5 Kweichow Moutai's Valuation Sensitivity Analysis

Change in MRP	Change in Beta									
	0.28	0.38	0.48	0.58	0.68	0.78	0.88	0.98	1.08	
4.00%	1402.35	1254.03	1133.67	1034.06	950.26	878.79	817.12	763.36	716.08	
4.50%	1346.67	1193.88	1071.77	971.95	888.83	818.55	758.36	706.22	660.63	
5.00%	1295.18	1139.15	1016.17	916.74	834.71	765.88	707.30	656.86	612.96	
5.50%	1247.42	1089.13	965.94	867.35	786.67	719.43	662.54	613.78	571.53	
6.00%	1203.00	1043.24	920.35	822.90	744.19	678.16	622.96	575.86	535.21	
6.50%	1161.58	1001.00	878.79	782.69	705.14	641.26	587.73	542.24	503.10	
7.00%	1122.87	961.97	840.74	746.13	670.26	608.07	556.17	512.21	474.51	
7.50%	1086.62	925.82	805.78	712.77	638.58	578.05	527.73	485.25	448.90	
8.00%	1052.59	892.23	773.55	682.18	609.69	550.78	501.98	460.89	425.83	

Source: Company data & Author

Figure 2 Monte Carlos Simulation
Source: Crystal ball software & Author



2. Business Description

Kweichow Moutai Co., Ltd. is a partial state-owned enterprise in China, specializing in the production and sales of Moutai liquor, together with the production and sale of beverage, food and packaging material. Produced in the town of Moutai, Guizhou province, Moutai is one of the best-known brands of Chinese liquor (or baijiu). Moutai offers an exceptionally pure, mild, and mellow soy sauce-like fragrance. It is called China's official "National Liquor." It is a complex beverage with a truly unique taste and history. (Table 6)

Baijiu, a Chinese distilled alcoholic beverage with a relatively high alcohol percentage, is a traditional beverage in China. Baijiu is made from one or more of these raw materials in varying amounts: Sorghum, Wheat, Rice, Sticky Rice, and Corn. Instead of using yeast like most other production processes, baijiu uses a fermentation agent called Qu (pronounced "chew"). Firms in the alcohol production industry manufacture traditional Chinese alcoholic drinks that are made of fine grain and ferments of different types and containing 18.0% to 60.0% alcohol. Three types of natural yeast are used to prepare various alcohols through cooking, fermentation, distillation, storage and blending processes.

Kweichow Moutai Wine Factory was established in 1951 (Kweichow Moutai Group, 2016). Starting from 1975, Moutai has become the "National Liquor" of China and received a multitude of awards from local and global competitions. In 1978 the production of Moutai wine exceeded 1000 tons, reaching 1068 tons. The high achievement reversed 16 consecutive years of serious losses. The company was listed on the Shanghai Stock Exchange in 2001. As the company increased spending after its listing, its output exceeded 10,000 tons in 2006 and approached 40,000 tons in 2016. From 1999 to recent years, it has been rewarded a myriad of local and global prizes as an admiration of the efforts put by Kweichow Moutai Group. Now, Kweichow Moutai is one of the World's 500 Most Influential Brands with 11.55 billion dollars, according to 2017 World Brand Laboratory (Table 7).

Kweichow Moutai divides its activities into 3 business segments: The production and sale of beverages, food and packaging materials; The development of anti-counterfeiting technology and the development of related products in information industry; Hotel management, accommodation, catering, entertainment, bath and parking management services. The production and sale of Moutai take a considerable amount of the total revenue. As the main product, the Moutai contributes almost 90.00% of the total revenue (Figure 3).

Table 6 Kweichow Moutai 's Brief Profile

Type	Public
Traded as	Shanghai stock exchange
Headquarters	Moutai Town Renhuai, Guizhou, China
Key people	Bao Fang Li Chairman & General Manager
Products	Moutai liquor & Moutai series liquor
No. of employees	24,029
Auditor	Shu Lun Pan

Source: Company data

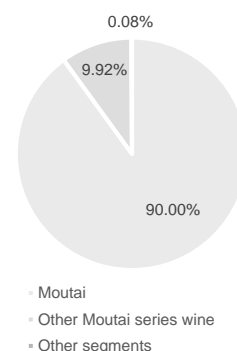
Table 7 Brand Finance 2017 Global Liquor Brand Value

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

Source: Xinlang finance

Figure 3 Moutai Revenue by Products 2017

source: company data



Company Strategies

Difficult for competitors to replicate

Kweichow Moutai, a leader in the luxury baijiu industry, is expanding its shares of higher-end, premium and super-premium baijiu markets. Moutai has high-end positioning and is widely considered to be a luxury product thanks to its scarcity and special cultural characteristics. The company's super-premium Moutai and Feitian broadly have no mature competitors in the baijiu market. And, Competitors would find it nigh-on impossible to replicate Moutai's distribution network in our view, because of Moutai's outsized bargaining power vs distributors due to its strong brand image, limited supply of the drink, and the wide slice of the margin accruing to distributors at present.

Competitive product

The production of Moutai has two characteristics: First, because Moutai production process is complex, and there is a unique geographical environment in Moutai town. It's impossible to expand Moutai significantly. The production is limited and scarce. Secondly, according to the production technology of Moutai, the base wine produced in the current year can only be sold after at least five years. Therefore, according to the base wine production five years ago, the production of Moutai wine can be estimated. (Table 8)

Table 8 Moutai's complex production process limits capacity expansion

Flavor of liquor	Sauce type	Strong fragrance type	Fragrance type
Firm outstanding material of Fermentation tank	Moutai	Wulinagye	Shanxifenjiu
Distillation temperature	Stone mortar	muddy mortar	Ground cylinder
Number of fermentations	40°C	25°C	20°C
Fermentation time	8 times	2 times	1 time
Storage time	300 days	70 days	56 days
Product taste	3 years	1 year	2 years
	Delicate and elegant, and the empty cup is long lasting.	Full, the entrance is sweet and pure	Especially clean, the fragrance is pure, and the aftertaste is very sweet.
	Secondary feeding, nine steamed foods, eight rounds of fermentation, seven times of taking wine.	Refueling ingredients, mixed steaming, mass wine picking, grading storage	Steam cleaning, high temperature lubrication
Production Process			

Source: Xinang Finance & Author

E-com platform

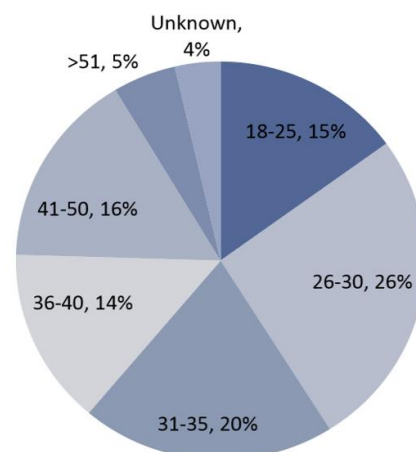
Kweichow Moutai announced in August 2017 that distributors and specialty stores should sell at least 30% of their remaining annual quotas via the Moutai Cloud E-com Platform at a price of Rmb1,299/bottle. The strategy worked well to alleviate short term rising pressure on Moutai's retail price. Also, in mid-November, management indicated this policy will continue in 2018 and might be optimized, according to industry news agency Jiuyejia. Moutai's E-com businesses include a B2C model and an O2O model. From data released by Tmall.com, young consumers (<35 yrs. old) count for more than 50% of Moutai's E-com platform. These young consumers will be the majority of Moutai's total consumers in future, so it is very useful to understand their preferences now. (Figure 4)

Target super-premium Market

Kweichow Moutai began focusing on the super-premium baijiu market in 2017. In 2017, the outbreak of high-end Moutai over 2,000 Rmb has a historic fact, and the first revenue exceeded 10 billion Rmb. Among them, product innovation design provides a

Figure 4 Consumer Breakdown on Moutai's E-com Platform

Source: Crystal ball software & Author



solid foundation for the company's high-end luxury goods strategy, while continuing to maintain product scarcity while making large sales. The company's flagship product, Feitian, targets the market for baijiu priced at Rmb1,700/bottle. The main product is 53 degrees Flying Moutai. The revenue in 2017 was Rmb 36.7 billion, accounting for 62% of the company's revenue, with a growth rate of 37%. It is the largest single item in the liquor industry. Beginning in 2016, the ultra-high-end Moutai began to increase its volume, gradually forming a shift from relying on the flying Moutai single product to the high-end Moutai and Feitian Moutai two-wheel drive. (Table 9)

We expect this product's prices and sales volume to increase, driven by a growing number of middle-class households and consumption upgrading of businesses.

Table 9 Moutai's complex production process limits capacity expansion

Series	Brand	Retail price
Aged Moutai	80years	Unknown
	50years	19000
	30years	11000
	15years	4800
Personalized Moutai	Black Moutai	4300
	Blue Moutai	2900
Zodiac liquor	2014~2017	3000~19000
Feitian Moutai	53°C vol	1700
	43°C vol	1000
Moutai series sprits	Laimao	400
	Hanjiang	330
	Huamao	290
	Moutai Wangzi	200~400
	Moutai Yingbin	100

Source: Xinlang Finance ,Author

Active Overseas Strategy

The Moutai Overseas Distributors Conference at the end of 2015, Moutai Group clearly pointed out that in the next five years, the overseas market should strive to achieve an average annual growth rate of more than 15% and strive to achieve more than 10% of overseas sales by 2020. In 2015, with the help of the centennial of Panama, Moutai took the initiative to carry out international communication and promotion. In 2016, Moutai also conducted a significant international evaluation and promotion in San Francisco and Hamburg, Germany under the guidance of "one belt and one road". (Figure 6,7)

Moutai, which is well-known and qualified to represent China, still has a lot of world-wide advocates and novelty seekers, although it may have a long way to go to adapt to the taste of foreign consumers, and there is still room for improvement in its ritualization and refinement of meals. It is believed that with Moutai's persistence and China's enhanced global influence, Moutai and Huawei, like each other, will allocate resources in the global market to create and engrave the great achievements and monuments of "Made in China".

Under the guidance of the overseas strategic objective, the overseas sales of Moutai's will be obviously far higher than domestic sales. Overseas income reached Rmb 1,608 million in the whole year of 2015. Moutai's overseas sales reached 2 billion 59 million in 2016 with an increase of 28.05% over the same period last year. Comparing with last 2 years, the sales in 2017 continually achieved into Rmb 2,270 million in total, reaching an increase of 21.10% over the level of last year. (Figure 5)

Figure 6 Moutai Sales by Regine, 2017
source: company data

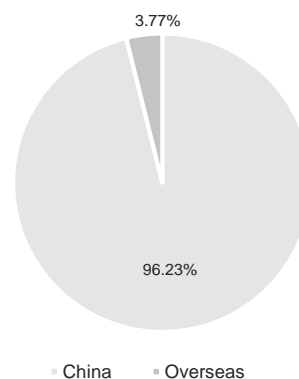
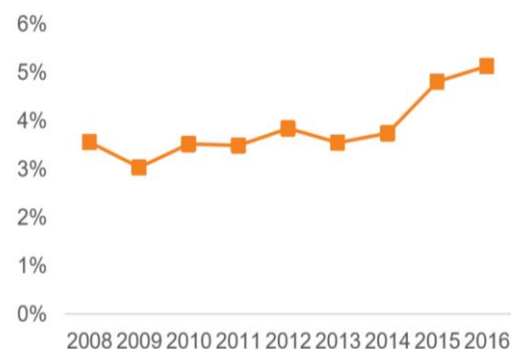


Figure 5 Market Overseas Revenue
Source: Xinlang Finance& Author



Figure 7 Moutai Overseas Income Shares
Source: Xinlang Finance



3. Management and Corporate Governance & Social Responsibility

On June 2018, Kweichow Moutai share capital amounted to Rmb 828.07 billion which comprised 1,256.20 million shares. Moutai Group owns 61.99% of Kweichow Moutai and is the company's largest shareholder. Moutai Group is controlled by State-owned Assets Supervision and Administration Commission of Guizhou Province. Eight of Kweichow Moutai's top 10 shareholders are institutional investors and have aggregate stakes of 11.13%. The company itself does not hold own shares. (Table 10)

Corporate governance model

- Board of Directors - is composed of 8 members (4 non-executives), none of which are independent. It is responsible for the management structure; The Board of Management (BoM) oversees managing Kweichow Moutai Group and sends monthly reports on the business position and forecast of the current year to the Supervisory Board.

- Party Administration Committee – is responsible to Implement the relevant national policies. Because Moutai Group owns 61.99% of Kweichow Moutai and is the company's largest shareholder. Moutai Group is controlled by State-owned Assets Supervision and Administration Commission of Guizhou Province.

- Supervisory Board – is composed of 3 members and 1 substitute is appointed by the General Meeting. It is responsible for the supervising structure and nomination of the Statutory Auditor; The Supervisory Board of KW is responsible for appointing, monitoring and advising the Kweichow Moutai BoM.

The company is controlled 61.99% by The Moutai group, and also the institutional investors holds stakes of 11.13%. It is difficult for an investor to have a large participation in the company and making a large investment. On the other hand, the Moutai Group is controlled by State-owned Assets Supervision and Administration Commission of Guizhou Province, which means the critical decisions are always considered by the upper government and the company will follow the route of the national politic target. (Figure 8)

Poverty alleviation

Closely revolving around overall planning and promoting the overall layout of the "five in one" and coordinating the "four comprehensive" strategic layout, Kweichow Moutai Gives full play to the synergy of enterprises, markets and society, and fully mobilizes the endogenous motivation of cadres and the masses in poverty areas. In 2018, the company implemented the "four major projects" of counterpart assistance, industrial feedbacks, feedback to villagers and assistance to students. And focus on helping Daozhen, Renhuai and surrounding counties and cities develop their economies. Kweichow Moutai intensify the efforts of industry to feedback agriculture, announcing that the company will float the purchase price of grain such as sorghum. It will also continue to invest funds to support the implementation of education, medical, party building, infrastructure construction and other aspects of Renhuai City, and help to promote a series of activities such as "national wine Moutai, the pillar of the country" to help poor students fulfill their university dream. (Table 11)

Environmental protection

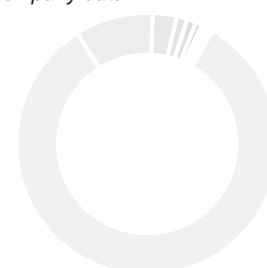
Kweichow Moutai made effect to increase energy conservation and emission reduction and achieve a comprehensive separation of pollutants from factories. Ensure that the comprehensive energy consumption of Moutai liquor unit products will be reduced by 2%. Since 2014, Rmb 50 million has been donated annually, and a total Rmb 500 million has been donated for the protection of the ecological environment in the Chishui River Basin for ten consecutive years. According to the company's production and

Table 10 Kweichow Moutai Top 10 Shareholders and their Stakes in the Company (as of June 29, 2018)

Shareholders	Type of shareholders	Number of stakes	% of shares
Moutai Group	Alpha A	778,771,955.00	61.99%
HKSCC	Alpha A	90,986,438.00	7.24%
Moutai Technology Development Corp.	Others	27,812,088.00	2.21%
Efunds Asset Mgt.	QFII	12,262,840.00	0.98%
Huijin Asset Mgt.	Others	10,787,300.00	0.86%
China Securities Finance Corp.	Others	6,988,042.00	0.56%
Oppenheimer Funds	QFII	4,173,500.00	0.33%
ICBC Shanghai 50 trading open index securities investment fund	SIF securities investment funds	3,794,454.00	0.30%
XingRmb Asset Mgt.	Others	3,487,220.00	0.28%
GIC Ltd.	QFII	2,602,465.00	0.21%

Source: Company data

Figure 8 Top Ten Shareholders Percentage source:company data



- Moutai Group
- HKSCC
- Moutai Technology Development Corp.
- Efunds Asset Mgt.
- Huijin Asset Mgt.
- China Securities Finance Corp.
- Oppenheimer Funds
- ICBC Shanghai 50 trading open index securities investment fund

Table 11 Poverty Alleviation

Source: Company data

129.6078 million yuan	Implementation of education	spent 113.68million yuan on helping 22,736 students
	road construction for 144.28 million yuan	Improved education resources for 15 million yuan

environmental protection needs, the company has decided to invest in upgrading and renovation of the old plant's sewage removal and distribution network, with an estimated total investment of Rmb199 million. In terms of greening ecology, in 2017, the factory added 300,000 square meters of greening area, with a greening coverage rate of 28.5%.

4. Industry Overview and Competitive Positioning

Industry Overview

There are 19 Baijiu listed Baijiu companies in China which means there are diversified competitors in Baijiu industry. China's liquor industry can subdivide the industry by price, as shown in the following. (Table 12)

Table 12 China's Baijiu Industry Price List

Source: Xinlang Finance

Category	Price	Features	Brand
Super high-premium	More than Rmb 1000	Oligopoly, high barriers to entry	Flying Moutai, Wuliangye,
High-premium	Rmb 500	Less mainstream products, mostly upgraded products for second-tier liquor	Blue and white porcelain wine, willing to, Yanghe dream blue M3,
Middle	Rmb 100-500	Big difference, regional brands predominate	Jiannanchun
Low end	Rmb 50-100	Intense competition and large market capacity	Golden Seed Liquor, Irit,

According to the National Bureau of Statistics, in 2017, the national liquor production enterprises above designated size completed a total of 19,180,600 kiloliters, a year-on-year increase of 6.86%. In 2017, 1,593 liquor companies above designated size were included in the national statistical bureau, including 128 loss-making enterprises, with a loss of 8.04%. The annual sales revenue of liquor enterprises above designated size was Rmb 556.442 billion, up 14.42% year-on-year; the total realized profit was Rmb 102.484 billion, up 35.79% year-on-year; the accumulated losses of loss-making enterprises was Rmb 786 million, down 24.30% year-on-year. According to the data of the General Administration of Customs, the amount of white spirits exported in 2017 was 16,600 liters, a year-on-year increase of 3.09%, and the total export value was US\$ 470 million, a year-on-year increase of 0.35%. Sales revenue, total profit growth, and loss decreased by nearly or more than double digits, and the performance of the liquor industry adjustment showed. (Figure 9,10)

Super high-premium Industry blooming era

The Chinese luxury market is unfolding in an unprecedented way. We define white wines of more than Rmb 1,000 as super high-premium, equivalent to entry-level luxury goods. Liquor priced more than Rmb 2,000 is defined as luxury liquor. The development of liquor luxury market is relatively lagging. Before 2012, due to the relatively limited wealth of residents, the abnormal upgrade volume led by the public sector and corrupt consumption is not a real luxury market. Today, liquor luxury is on the rise. The evidence is as follows: First of all, it is estimated that the growth rate of high-end Moutai over Rmb 2,000 will reach 67%, and the revenue will reach 13.7 billion Rmb. The growth rate is significantly higher than that of Feitian Moutai. Among them, the Year of the Rooster is a big success, and the market is generally out of stock. Second, other high-end wines are expected to further follow Moutai price increases. Finally, new products of more than 1,000 Rmb are rapidly increasing. Langjiu and Shuijingfang have successively released more than 1,000 Rmb of new products. Dream Blue M9 and manual class growth rate are expected to reach more than 100%; Tuopaishede is also launching the 1,980 Rmb price of Tunzhihu. (Figure 11)

Figure 9 Baijiu Industry Total Production

Source: Dongfangcaifu

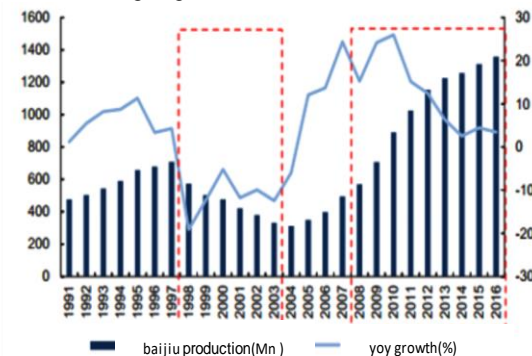


Figure 10 Baijiu Industry Sales

Source: Dongfangcaifu

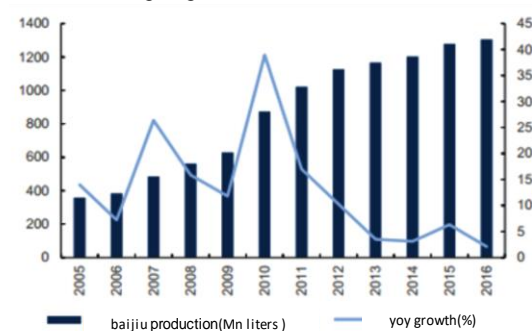
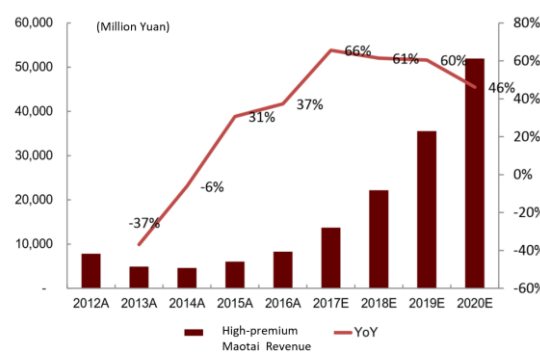


Figure 11 High-Premium Moutai Spirits Market Improvement

Source: CICC



At present, the high-end brand-based companies in the high-end market are mainly "Mao Laowu", as well as Yanghe, Shuijingfang, Qipai, and Jiujiu. The brand concentration of high-end wines has not improved significantly: it indicates that the industry demand has begun to diversify. On the one hand: within the high-end liquor enterprises represented by Guizhou Moutai, the growth rate of differentiated new products is higher. For example, the growth rate of high-end wines in Moutai reaches 67%, the growth rate of series wines reaches 149%, and the revenue of Feitian Moutai increases. The speed is expected to be 20%. Yanghe's Dream Blue Handcraft Class, M9 and other growth rates also significantly surpassed Sky Blue and Dream Blue M3. The growth rate of high-end new products of Shuijingfang also significantly exceeded that of Shuijingfang Brewing No. 8 and Jingtai. (Figure 12)

The global luxury goods market is basically mature, but it is still in a stable growth period, and China is in its infancy. Bain Consulting expects the global luxury goods market to reach 1.16 trillion euros in 2017, or about 9.06 trillion Rmb. Among them, Luxury wine takes 6% of the total shares.

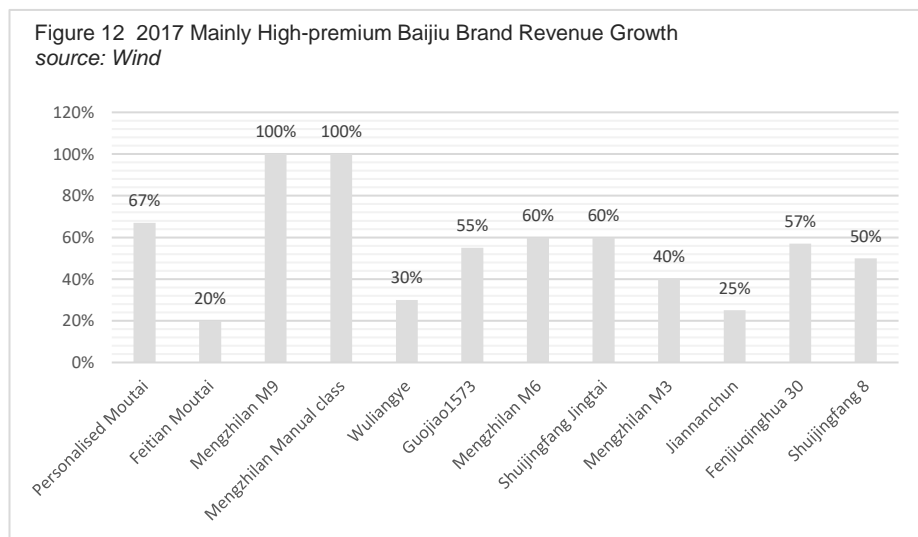


Figure 15 McKinsey's Prediction of China's Demographic Level
Source:McKinsey

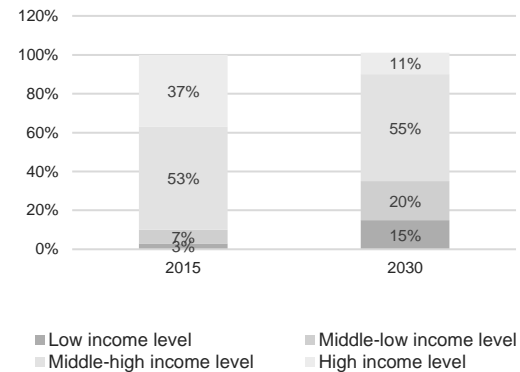


Figure 13 Chinese GDP growth
Source: Bloomberg

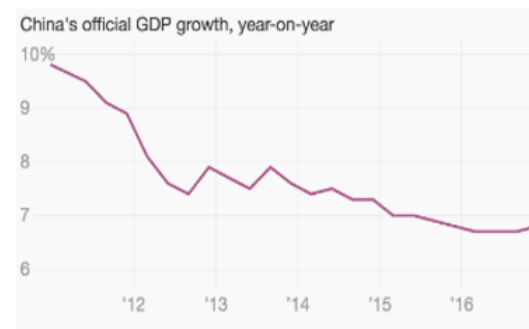
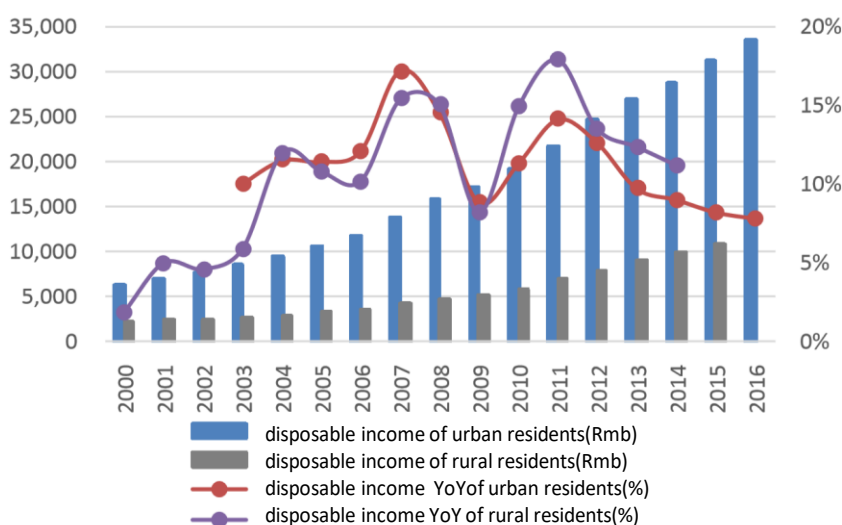


Figure 14 Income of Urban Residents and Rural Residence
Source: Yahoo Finance



Chinese Economic Outlook

One of the main drivers of the profitability of Baijiu industry is the Chinese economy-growth. The GDP in China was worth Rmb82712.2 billion in 2017. The GDP value of China represents 18.06% of the world economy. The Chinese economy expanded 6.7% in 2017, equal with 6.7% in 2016, but lower than a 6.9% growth in 2015. It was the weakest full-year expansion since 1990. Quarterly, China's GDP grew by 6.9% in the first quarter, 6.9% in the second quarter, 6.8% in the third quarter and 6.8% in the fourth quarter. As the world's second-largest economy, china will move from high-speed to high-quality growth as it pushes ahead with reforms. The stable and sustainable economic environment supports the industry growth. (Figure 13)

Disposable Income Level

From 2013 to 2016, the per capita disposable income of urban residents increased by 21.3% from 26,467 Rmb to 33,616 Rmb, and the per capita disposable income of rural residents increased from less than 9,430 Rmb to more than 123,633 Rmb , increased by 31.1%. Liquor, as a basic element of social interaction, has many attributes, such as friendship, atmosphere, health and so on. With the improvement of consumption ability, more and more people can pay for high-grade liquor.

The per capita disposable income of urban residents and the per capita net income of rural residents are increasing at an annual rate of more than 8%. The accumulation of wealth, the improvement of living standards and the consequent demand for healthy consumption are shown in the white wine industry. It is obvious to see that consumers are more willing to buy high-quality liquor to meet the demand of "less drinking, good wine "psychological appeal. (Figure 14)

Large consumption base

According to McKinsey's "The Middle-Class Reshaping China's Consumer Market," the upper middle class will rise from 14% in 2012 to 54% in 2022, and its corresponding consumption share will rise from 20% to 56%; According to the Economist Think Tank's "Looking Forward at Chinese Consumers 2030", the proportion of middle-income and high-income people will rise from 7% in 2015 to 20% in 2030. About three-quarters of the Chinese in the next 15 years may be defined as middle-income people. China will become a middle-class country by 2030. (Figure 15)

Moutai's consumption demand mainly includes personal consumption, business consumption and government consumption. After 2012, the policy of restricting public consumption led to a sharp decline in government consumption. At the same time, with the price returning to rationality and the level of consumption rising, mass consumption smoothly inherited the gap left by government consumption, and the proportion of personal consumption rose from 5% to 45%. Therefore, in the new cycle, mass consumption and commercial consumption become the main contribution of demand for Moutai, and lead to the rising price of Moutai, we will analyze the mechanism of the two in detail. (Figure 16)

Consumption upgrading

The proportion of urban residents' food consumption to total consumption expenditure in China dropped from 57.5% in 1978 to 34.8% in 2015, and the Engel coefficient gap between urban residents and rural residents is also decreasing. The decrease of Engel's coefficient brought by the increase of per capita disposable income has become a trend. The family's sensitivity to food price has further reduced and has entered the stage of family consumption upgrading. (Figure 17)

Government Restriction

The government has made great efforts in anti-corruption and has made a series of policies. In 2012, the Chinese Central Military Commission made a notice that point out do not arrange banquets, not drinking alcohol, not upscale dishes. In particular, the

Figure 16 The Economist Predicts the Development of China's Middle Class
Source: The Economist

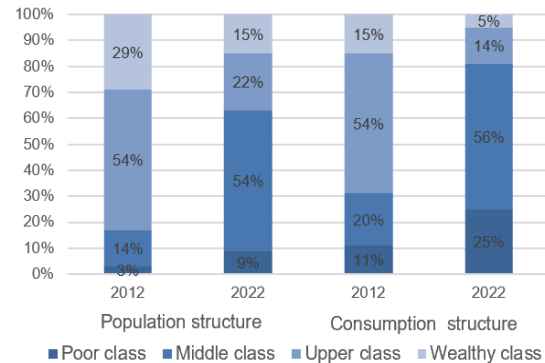


Figure 17 Engel Coefficient in China 1978-2014
Source: The Economist

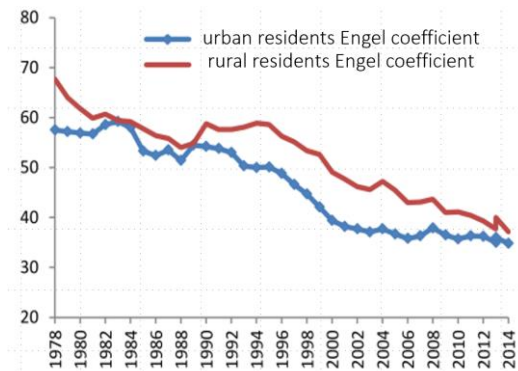
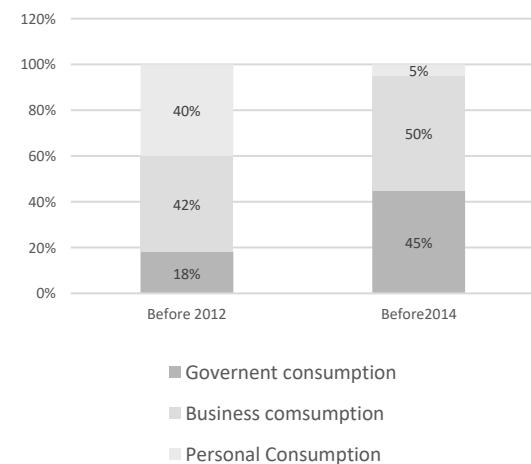


Figure 18 Business Consumption and Personal Consumption Contribute to Major Consumer Demand
source: Zhongtai security

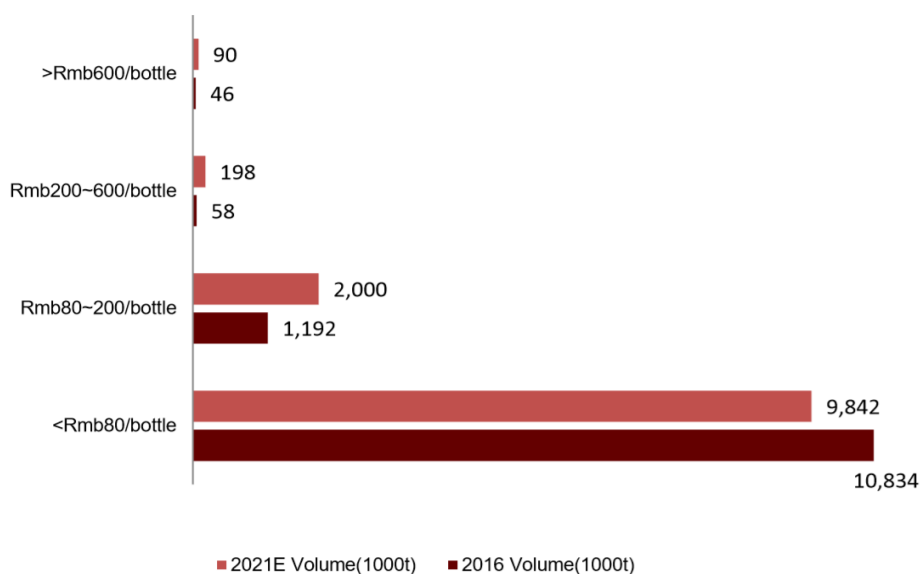


restriction of "three public" consumption (Consumption of public funds on three major private purposes—cars, banquets and overseas visits) has made the Chinese catering consumption revenue growth rate drops to 9% in 2013 and 10% in 2014. This government restriction also enables the luxury Baijiu industry suffering heavy losses, and the sales volume of Baijiu has dropped considerably. The advantage of the seller's market in liquor industry is gradually disappearing. The growth rate and profit growth rate of liquor industry showed a sharp decline. The annual growth rate of liquor industry's revenue fell from 40.3% in 2011 to 5.7% in 2014. (Figure 18)

Supply short in high-end market

From 2013 to 2017, the annual growth rate of non-governmental demand for Moutai liquor could reach 25%, considering price increases. However, the supply of Moutai liquor increased little, the actual supply increased by about 15% in 2016, is expected to be 34% in 2017, the average growth rate of supply in the next three years is only 12%, it is difficult to meet market demand. According to the dealer survey, the current supply of Moutai can only meet 50% of the market demand. At the same time, the retail price has soared to 1700 Rmb. This round of retail price increase is driven by pure private demand, which can best reflect the real demand and is an important basis for factory price increase. On December 28, Moutai Distributor Conference announced that the ex-factory price of Feitian Moutai was raised to 969 Rmb, the terminal guidance price was 1 499 Rmb. At the end of December, the price was 1 499 Rmb on the online E store, at the same time the off-line stock was still serious. (Figure 19)

Figure 19 Baijiu Product Position Structure
Source: National bureau of statistics, CICC research



Competitor Analysis

The spirit market in China is highly fragmented. We can tell that the five leading Baijiu producers account for less than 15% of total market capacity in 2016. 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 Baijiu industry. Due to the quality and price of production in the market, we can distinguish three types of competitors, the Luxury Baijiu Companies, such as, Guizhou Moutai, the Mid-end Baijiu Companies like Luzhou Laojiao, and the Low-cost Baijiu Companies like Tuopai Shede, etc. (Table 13)

Table 13 Baijiu Industry Structure

Source: Xinlang Finance



Both brand and quality are indispensable

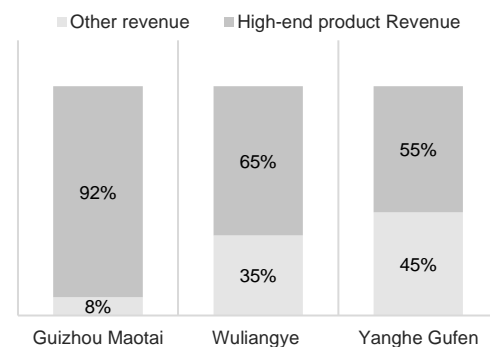
First, the requirements of high-end wines for the brand's heritage have objectively excluded most liquor companies, and only a handful of famous wine parties have the strength to enter this market in the top of the liquor pyramid. In addition, from the perspective of quality, high-end liquor has high requirements for the life of Dianchi Lake, high-quality liquor production rate, and storage time. Generally, only the Dianchi Lake, which has been used continuously for more than several decades, can be used to produce high-end wine. The original baijiu produced must be stored for more than 3-5 years before it can be marketed. Various reasons have determined that the output of high-end liquor is extremely limited. In the industry's annual output of 13 million tons, high-end liquor accounts for only about 4%.

At present, Moutai, Wuliangye and Yanghe are still the troika of the high-end liquor market, accounting for more than 90% of the market share; other such as Yanghe Mengzhilan M9, alcoholic internal ginseng, Shuijingfang new collection, Gujing vintage puree for 26 years, Kouzijiao30 years and so on have also existed in the high-end market, mainly to enhance the role of the brand, have a certain influence in the local market, but in terms of output and brand power, there is still a clear gap from the top 3 Baijiu brand. (Figure 20)

Baijiu is typically made by mixing steamed sorghum grains, water, and a special fermentation. Those elements are extremely sensitive to the geographic condition and technology of the company. Therefore, there is a significant differentiation of the production for the luxury baijiu companies which results in the high price of production. The main gross profit comes from the high-end product. Thus, according to the 2017 annual reports, they focus on improving quality of traditional production to maintain the differentiation advantage, for instance, Wuliangye increased 54.1% the investment in R&D in 2017. The mid-end companies took the strategy to develop new and healthier production with lower price to expand the market and increase the profitability. And the mid-end companies invested in advertng more than luxury companies.

As the top brand in the industry, Moutai currently accounts for less than three-thousand of the sales volume, and the restructuring of the industry has just begun. Within the high-end liquor enterprises represented by Guizhou Moutai, the growth rate of differentiated new products is higher. For example, the growth rate of high-end liquor in Moutai is 67%, the growth rate of series liquor is 149%, and the revenue growth rate of Feitian Moutai is expected to be 20%. The Yanghe River shares dream of blue manual class, M9 and other growth rates also significantly surpass sky blue and dream blue M3.

Figure 20 2016 Gross Profit Contribution for Luxury Baijiu Company
source: Dongfangcaifu



Competitive Positioning

Table 14 Swot Analysis

Source: Author

SWOT Analysis

Strengths	Weakness
Production unique techniques Noble brand in high-premium baijiu industry Geographical and climate advantages	Political regulation on alcohol consumption Long production cycle: 5 years Capacity limitation
Opportunities:	Threats
Strong and stable Chinese economic growth Overseas expanding strategy Technical innovation & Expanding capacity Exploit E-com sailing channel	Many competitors with price advantages Tax policy for liquor industry Counterfeit products infringe trade mark privileges

Porter's 5 Forces

Competitive Rivalry (medium-low) 2

Although there are many or strong competitors, the high-end liquor products are limited in category, order, the strategic objectives of the manufacturers are basically the same, Wuliangye, Yanghe and other in grade positioning with Moutai have a significant gap. Moutai is at the top of the pyramid and has obvious heterogeneity and identification. As far as consumption is concerned, because of the great differences in flavor, taste and emotional appeal, it is difficult to convert unless the price gap widens greatly

Threat of New Entrants (Low) 0

The existence of economies of scale makes it necessary for new entrants to enter the industry on a large scale and at the risk of a strong counterattack by existing enterprises; or to enter on a smaller scale but endure the disadvantages of high product costs for a long time, so it is difficult for new entrants to produce products of the same quality.

For example, high-grade Moutai-flavor liquor needs to be blended proportionally with aged liquor. The number of aged liquor that new entrants can obtain is limited and difficult to produce unless the quality is reduced. The government has stopped issuing liquor production licenses, and potential entrants can only enter through acquisition, which makes it difficult to form large-scale liquor in the short term.

The long production cycle of Moutai-flavor liquor (Moutai is 5 years) has led to the need to pay large funds, forming a threshold for entry. In terms of distribution channels, the various channels are maintained and operated by high-end liquor enterprises for many years. It constitutes an obvious barrier to entry for new entrants.

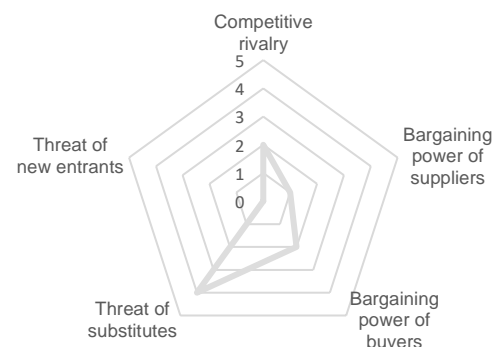
Threat of Substitute Products (Moderate) 4

For the domestic liquor industry, the consumption groups of each flavor type are relatively stable and do not pose a serious threat to each other. Foreign high-end liquor brands are numerous, with the increase of national disposable income, more foreign liquor like wine, whiskey may threaten to the high-end liquor market.

Bargaining Power of Buyer (Low) 2

Because of its unique products, consumers value great importance to Moutai's brand, quality and spiritual feelings. Moutai has absolute pricing power because of the

Figure 21 Porter's 5 Forces
Source: Author



shortage of supply and demand. There is no bargaining situation caused by the size of the distributor's sales.

Bargaining Power of Suppliers (Medium-low) 1

In terms of raw materials, sorghum and wheat growers are very decentralized. For the farmers who provide sorghum and wheat, Moutai's relatively high purchase price and relatively stable purchase volume play an important role in improving their living standards. But the reduction in crops production due to weather conditions could threaten the supply of liquor raw materials. For example, in 2015, production in Moutai Town was decreased, comparing the same period last year.

Like any other players in the market, Kweichow Moutai has its strengths, weaknesses, opportunities and threats. In such a competitive industry as the Chinese liquor industry, companies have to explore their strategies in order to be successful.

5. Investment Summary

Our recommendation is hold, with the target stock price of Rmb744.19 and only an upside potential of 1.74%.

Moutai has financial attributes such as long shelf life, relative scarcity, and preservation and appreciation. Therefore, the price of Moutai is affected by demand. The supply side is expected to increase slowly, and the demand side is expected to continue to expand, so the tight supply and demand pattern will exist for a long time.

Valuation Methods

Price target is derived from discounted cash flow model (DCF) was through free cash flow (FCFF), getting the target stock price of Rmb744.19. By verify the price target we got, a relative method has be chosen to use. We picked the most 2 convincible multiples which are P/E and EV/EBITDA. In this method, we achieve a price target of Rmb733.66 which is almost equal to the current price. (Table 14)

Table 15 Multiple Valuation Result
Source: Author

DCF	P/E	EV/EBITDA	Average
Target Price	744.19	726.17	735.18

Risks to Price Target

There are several variables which will affect the price target of Kweichou Moutai. The sensitivity analysis conducted illustrates that the Fluctuating upward Beta and Market risk premium (MRP). A significant change in Beta and MRP prices causes a backdrop to the target price by 33.2% and 32.9%, respectively.

Investment Risks

Several risks may volatile the sales of Kweichou Moutai. It should be noticed that the new regular of Chinese government may affect the whole alcohol industry, especially for high-premium baijiu sprints. The pressure on Sangong's consumption continues to increase. Although the proportion of official consumption is lower year by year, the future will not eliminate the possibility of restricting the use of alcohol by public servants. Continue to eliminate the liquor in the system, which in turn affects business consumption and private consumption.

A food safety incident similar to melamine is a devastating blow to the industry, and the liquor plasticizer event affects the industry in stages. For the quality of food, more is a security incident, and the blow is also heavy.

6. Valuation

We used two different valuation methods to evaluate Kweichow Moutai, an absolute and a relative valuation model.

For the absolute valuation model, we used the Discounted Cash Flow (DCF) approach. This method is the most appropriate for this company due to the amount of information that we were able to get, which made it possible to reach the enterprise value of the group. In order to reach the enterprise value of the company, it was computed the Free Cash Flow to the Firm (FCFF) of the group.

Revenue

Revenue includes sales & services revenue and financial revenue. We estimate the revenue based on the Industry revenue level, according to information we acquired, from 2010 to 2017. The revenue for industry can be 9.52% YOY on average, Moutai take 10.8% of the market. Especially, the baijiu industry experienced the industry adjustment period 2014-2015. According to the industry research we did, obviously to see that the industry will explore sustainably in a quick speed. And, considering the strong bargaining power and pricing ability. A 9.52% revenue CAGR was assumed by us. Then, we estimated financial revenue based on a 5-year historical percentage of cash and cash equivalents, among last 5 years, the percentage increased in a rate of 14.8 % on average. The company plan to come into the financial market and expected the revenue from financial area would take 20% of the total revenue in 2020.

Cost of revenue

The cost of revenue, which includes cost of good & services and cost of financial revenue, which were estimated considering the historical operating level.

CapEx

For the company, the CapEx were not in accordance with rules, respectively Rmb 2,605 of FY2014, Rmb1,882 of FY2015, Rmb3,960 of FY2016 and Rmb1,906 of FY2017. Considering the overall industry environment, it was assumed that the Capex would be increased based on the FY2017 with CAGR of 25%.

Depreciation Amortization

Considering the average D&A rate of the last 5 years, the depreciation of tangible fixed assets rate was 6.39% and the amortization of the intangible assets rate was 2.28%. It was assumed that the company will operate stably.

Demand

We considered the valuation period is 5 years. This period went from December 31, 2017 until December 31, 2022. After this period, the Terminal Value is then added.

WACC

The discount rate applied to the future cash-flows is the one that results from the Kweichow Moutai's Weighted Average Cost of Capital (WACC). This rate fluctuates rarely in next 5 years due to changes in the company's capital structure. The WACC rate was estimated using the following formula:

$$WACC = k_e * [E/(E+D)] + k_d * [D/(E+D)] * (1-T)$$

The WACC rate computed for 2018 is 8.01% (table 21), near the currently WACC rate estimated by Kweichow Moutai of 8.07%, near the value that we estimated for 2018. (Table 15)

The Cost of Equity (ke), is the rate of return that stakeholders require for a company. For 2018, we predict a cost of capital of 8.57%. It was calculated using the Capital Asset Pricing Model (CAPM). We do include the Country Risk Premium, which is the additional risk associated with investing in an international company, rather than the domestic market. The Chinese CRP is 0.81%. The formula used is the following:

$$k_e = R_f + \beta * MRP$$

For the Risk-Free Rate (Rf), we get from the Statistics, for china which is 3.6754%. For getting the levered Beta of the industry, we search from google finance, the calculation recently is 0.68. For the market risk premium (MRP), we used the country economy's data of 6.00% for china.

For the tax rate (T), we considered 15% for corporation tax plus 10% for trade tax and solidarity surcharge, according to Chinese Law, reaching a total tax rate of 25%.

Table 16 WACC Calculation

WACC	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
COST OF EQUITY						
RF	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%
CRP	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
MRP	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta levered	0.68	0.68	0.68	0.68	0.68	0.68
Cost of equity	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%
COST OF DEBT						
Cost of debt	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
Marginal tax rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
After-tax cost of debt	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%
WACC						
Weight of equity	94.09%	93.32%	91.73%	87.56%	90.17%	91.98%
Weight of debt	5.91%	6.68%	8.27%	12.44%	9.83%	8.02%
WACC	8.07%	8.01%	7.88%	7.53%	7.75%	7.90%
<i>Source: Company data & Author</i>						

We follow the Perpetuity Growth Model approach to calculate the Terminal Value (TV), We computed assuming a Perpetuity WACC equal to the 2022 WACC rate of 8.57%, and a Perpetual Growth Rate (g) of 2.5%, considering the bright industry analysis, in order to be more realistic for the terminal value and in line with the Chinese inflation rate. The formula used is the following:

$$TV = [FCFF * (1 + g)] / [(WACC - g)]$$

Terminal value

As we analyzed above, FY2014 can be seen as a industry turning point. Chinese baijiu industry greeted new era since that. As the top brand in the whole Industry, Kweichow Moutai target on the high-premium market, in which its status of high-end liquor leaders is difficult to shake. Therefore, we expect Kweichow Moutai to follow the expected average long-term inflation target of PBOC of china. A perpetuity growth rate of 2% is assumed for the terminal value.

Dividend policy

Kweichow Moutai was paying the dividends in a comparable stable Dividend Payout Ratio (DPR), which is 50%. Therefore, it was assumed that the dividend for each year next years will maintain this dividend payout level.

Multiples Valuation

For the relative valuation model, we used the Market Multiples approach. In order to achieve the target price, a peer group was selected from a large sample of liquor

groups that had to meet several criteria that were selected in order to create a group of comparable companies in terms of structure, dimension and risk. For this valuation we used the multiples Enterprise Value to EBITDA (EV/EBITDA) and Price to Earnings (P/E).

we conclude that our peer group is consisted of 4 companies, which represents half of the initial sample. They are: Shuijingfang, Wuliangye, Yanghe and Shanxifenjiu. For selecting the peer groups, first, we considered 3 processes which are brand position, price of product, total revenue, market capital. (Table 17)

This peer group was used to compute the average forecast EV/EBITDA and P/E for 2018, in order to compute the price target using the multiple valuation. We generated and calculated several multiples for comparing the peer group difference. (Table 18) And also, we generate the Moutai multiples 2018 estimation from Bloomberg.

Table 17 Peers' Selection
Source: Dongfangcaifu & Author

Company	Industry position	Total revenue	Retail Price	Market Cap	Peer
Wuliangye	Y	Y	Y	Y	YES
Yanghegufen	Y	Y	Y	Y	YES
Luzhou Laojiao	Y	Y	N	Y	NO
Shunxingnongye	N	N	Y	N	NO
Shuijingfang	Y	Y	Y	Y	YES
Shanxifenjiu	Y	Y	Y	Y	YES
Jiugujiu	Y	Y	Y	N	NO

Table 18 Baijiu Industry Peer Group Multiples, 2018

	Shuijingfang	Wuliangye	Yanghe	Shanxifenjiu	Average	Median
P/E	31.10	20.30	21.29	26.33	24.76	23.81
P/Book	10.05	4.18	5.07	6.31	6.40	5.69
P/Sales	6.45	6.70	7.19	4.59	6.23	6.58
P/Cash Flow	34.46	20.98	17.38	37.24	27.52	27.72
EV/EBITDA	22.43	12.68	14.48	17.42	16.75	15.95

Source: Bloomberg

Table 19 Margin and Return Comparison

2017E	Gross margin	Net margin	ROE	CROCI
Domestic companies				
Kweichow Moutai	91%	44%	29%	31%
Wuliangye Yibin	72%	31%	19%	18%
Jiangsu Yanghe	63%	34%	25%	24%
Luzhou Laojiao	71%	25%	20%	19%
Anhui Gujing Distillery Co.	76%	15%	17%	20%
Shanxi Xinghuacun Fen Wine	71%	18%	23%	23%
Qinghai Huzhu Barley Wine Co.	66%	12%	6%	7%
Domestic average	73%	25%	20%	20%
Global companies				
Pernod Ricard	62%	16%	10%	8%
Remy Cointreau	67%	12%	11%	10%
Diageo	61%	23%	24%	12%
Davide Campari	57%	13%	12%	11%
Global average	64%	17%	14%	11%

Source: Gao Hua Securities Research, Goldman Sachs Global Investment Research

A note on our target multiple premium In the last 10 years, Moutai has traded at an average 7% PE premium to Wuliangye and Luzhou Laojiao, supported by higher growth (27% 2006-16 EPS CAGR vs. 19% on average for Wuliangye and Luzhou Laojiao) and higher ROE (34% 10-year average ROE vs. 27%); in 2018-21E, we continue to forecast Moutai to lead peers in earnings growth and ROE with higher pricing power and potential for price hikes. With this in mind, we set our premium at 10%. We value the stock on long term PE and EV/EBITDA with 10% premium to industry average target multiple based on 3 reasons as follows: (1) Stronger pricing power based on the new retail model, and potential for a bigger profit pool from more regular price hikes. (2) Higher earnings visibility with less volatility around wholesale and retail prices. (3) Higher returns (ROE/CROCI) than peers due to stronger pricing power. (4) Further transition to private consumption and millennials consumers - leading to more sustainable growth in the long term. (Table 19)

Table 20 Multiple Valuation (EV/EBITDA)

	EV/EBITDA
Multiple	19.10
EBITDA	49,490
Average Peers EV/EBITDA	16.75
EV	829,075
Net Debt	-351
Market Equity	829,426
Target Price	726.17
Current price	731.46

Source: Author

For the P/E, we reached a target price of Rmb741.15 for the end of 2018, representing an upside potential of 1.41% (Table 21).

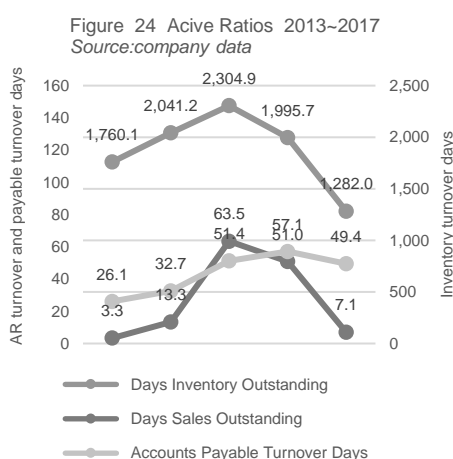
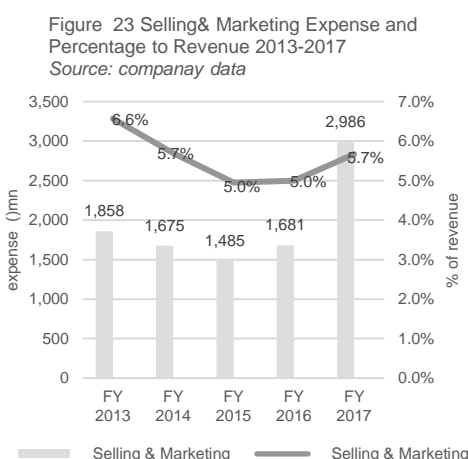
For the EV/EBITDA, we reached a target price of Rmb726.17 for the end of 2018, representing a downside potential of 9.73% (Table 20).

7. Financial Analysis

Kweichow Moutai's sales and profit have maintained strong growth since its listing in 2001. In 2001–2017, its sales and earnings CAGR was as high as 23.6% and 30%, respectively. The company managed to grow and expanded shares rapidly in the premium baijiu market even in 2013–2014 when the industry contracted. It also has strong profitability with gross margin and net margin as high as 91% and 46%, respectively. The company can make its profit margin stable through regular price hikes. (Figure 22)

Moutai has a very high gross profit, due to the low cost of brewing, from the financial report, it is interesting to find that the package material cost takes 50.15% of the total raw material purchases. However, the Bowing raw materials cost takes less 8.36% than the cost of packages. (Table 22)

According to the research, the company's selling expense ratio is just 4%, which is low in the baijiu industry, and this ratio is trending downward. These reflect Kweichow Moutai's good brand reputation, competitive products and strong bargaining power against downstream partners. The portion of customer advance payment in Kweichow Moutai's revenue is well high, achieving 15.5% in 2016 and 10.7% in 2017, which considered to be high among other firms. The advance payment is mostly prepayment by its dealers. Depending of the limited supply and the character of the product, Moutai has strong bargaining power among the retailers. And, aiming to expend the retail model, Kweichow Moutai is attempting to reduce customer advance payment in order to lower financial costs of its dealers. (Figure 23)



Inventory turnover period increased from 4.8 years in 2013 to 6.3 years in 2015, then decreased to 3.6 years in 2017, indicating that super-premium vintage Moutai accounts for an increasing part of Kweichow Moutai's total products. Besides, with the market growth was buoyant in recently 2 years, Kweichow Moutai decreased the inventory level. (Figure 24)

Table 21 Multiple valuation(P/E)

Moutai EPS	27.24
Average Peers P/E	27.23
Price Target	741.15
Current price	731.46

Source: Author

Figure 22 Growth margin and net income margin
source: company data

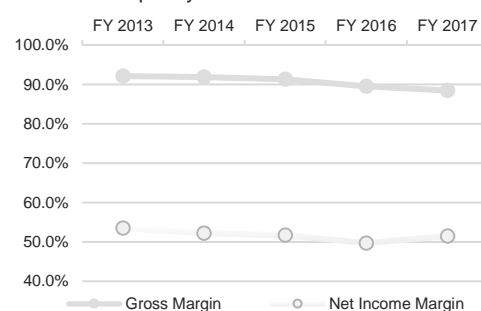
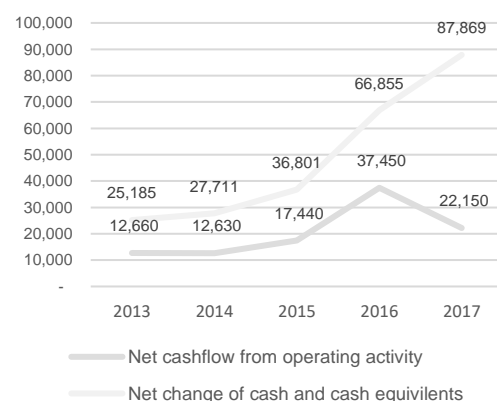


Table 22 Raw Material Purchase
Source: Company data & Author

Raw material	Purchase in 2016	Purchase in 2017	Proportion of total purchases in 2017
Brewing raw materials	1372.13	1533.11	41.79%
Package material	1585.52	1839.95	50.15%
Energy cost	234.25	255.96	6.98%
Workshop auxiliary materials	212.23	39.94	1.09%
Total	3404.13	3668.96	100.00%

Figure 25 Cash Flow Edges Up 2013–2017
Sources: Company data



Cash flow remains stable and ample between 2013-2015. However, after 2015, cash and cash equivalents grow with a CAGR 54.5%, reached Rmb66.8bn and Rmb87.8bn at end-2016/17, respectively. On the other sides, net cash flow from operating cashflow decreased from 37.4 to 22.1 at end-2016/17. This can be explained by the prosperity of the baijiu industry in 2016 with industry sales rapid growth, which is more obvious in the high-end liquor industry. (Figure 25)

Kweichow Moutai as the top brand in the domestic baijiu industry, holds a huge market capital with 96.5 in May,2018. P/E ratio I indicates the dollar amount an investor can expect to invest in a company in order to receive one dollar of that company's earnings. The P/E is was in the medium position among 37 listed baijiu companies, which can be explained that the company is doing exceptionally well relative to its past trends. ROE is Ranked fourth in the same industry listed company, which indicate that the company is very efficient in operations when making use of those funds. (Table 23)

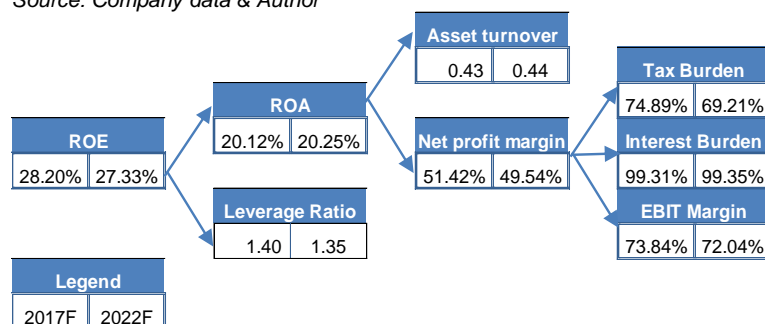
Table 23 Key Ratios Industry Ranking

	Total Capital (billion)	Market Capital (billion)	Net Profit (billion)	P/E	Net Book Value	Profit Margin	Net Income Margin	ROE
Kweichow Moutai	81.1	96.5	15.8	25.74	8.69	90.94%	50.67%	15.87%
Baijiu Industry Average	43.9	8.79	10.3	40.21	3.16	53.35%	4.13%	6.38%
Industry Ranking	1/37	1/37	1/37	20/37	3/37	1/37	1/37	4/37

Source: Dongfangcaifu

Table 24 Dupont Analysis

Source: Company data & Author



8. Sensitivity Analysis

We have performed a sensitivity analysis with the purpose of quantifying possible changes in YE18 Kweichow Moutai's 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 80,000 possible scenarios was conducted. We concluded that the variables which should be primary targets of a more comprehensive analysis, as shown in Figure 48, correspond to Kweichow Moutai's Market Risk Premium (MRP), Risk Free Rate (RF), Beta and the Terminal growth rate (g). According to the sensitivity analysis by crystal ball, MRP changes impact directly the cost of equity, and changes Beta and Risk-Free Rate also impact the cost of equity via. Through Table 23, it is possible to evidence that the region of the sensitivity

Table 25 Investment Ratings According Risks

	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%

Source: Author

analysis table which supports our Neutral recommendation corresponds to the one. (Table 26,27)

Table 26 Kweichow Moutai's Valuation Sensitivity Analysis

		Change in Beta									
		0.48	0.53	0.58	0.63	0.68	0.73	0.78	0.83	0.88	
Change in MRP	744.19										
	4.00%	1133.67	1081.62	1034.06	990.43	950.26	913.16	878.79	846.86	817.12	
	4.50%	1071.77	1019.47	971.95	928.58	888.83	852.28	818.55	787.34	758.36	
	5.00%	1016.17	963.95	916.74	873.85	834.71	798.85	765.88	735.46	707.30	
	5.50%	965.94	914.05	867.35	825.09	786.67	751.59	719.43	689.84	662.54	
	6.00%	920.35	868.97	822.90	781.37	744.19	709.48	678.16	649.43	622.96	
	6.50%	878.79	828.03	782.69	741.95	705.14	671.73	641.26	613.37	587.73	
	7.00%	840.74	790.69	746.13	706.22	670.26	637.70	608.07	581.00	556.17	
	7.50%	805.78	756.50	712.77	673.70	638.58	606.86	578.05	551.79	527.73	
	8.00%	773.55	725.07	682.18	643.96	609.69	578.79	550.78	525.29	501.98	

Source: Crystal Ball Software Author

Table 27 Kweichow Moutai's Upside Potential Sensitivity Analysis

		Change in Beta									
		0.00	0.48	0.53	0.58	0.63	0.68	0.73	0.78	0.83	0.88
Change in MRP	5.00%		52.4%	45.4%	39.0%	33.2%	27.8%	22.8%	18.2%	13.9%	9.9%
	5.25%		44.1%	37.1%	30.7%	24.9%	19.5%	14.6%	10.1%	5.9%	2.0%
	5.50%		36.6%	29.6%	23.3%	17.5%	12.2%	7.4%	3.0%	-1.1%	-4.9%
	5.75%		29.9%	22.9%	16.6%	10.9%	5.8%	1.1%	-3.3%	-7.2%	-10.9%
	6.00%		23.7%	16.8%	10.6%	5.1%	0.0%	-4.6%	-8.8%	-12.7%	-16.2%
	6.25%		18.2%	11.3%	5.2%	-0.2%	-5.2%	-9.7%	-13.8%	-17.5%	-21.0%
	6.50%		13.0%	6.3%	0.3%	-5.0%	-9.9%	-14.3%	-18.2%	-21.9%	-25.2%
	6.75%		8.3%	1.7%	-4.2%	-9.4%	-14.1%	-18.4%	-22.3%	-25.8%	-29.0%
	7.00%		4.0%	-2.5%	-8.3%	-13.4%	-18.0%	-22.2%	-25.9%	-29.4%	-32.5%

Source: Crystal Ball Software Author

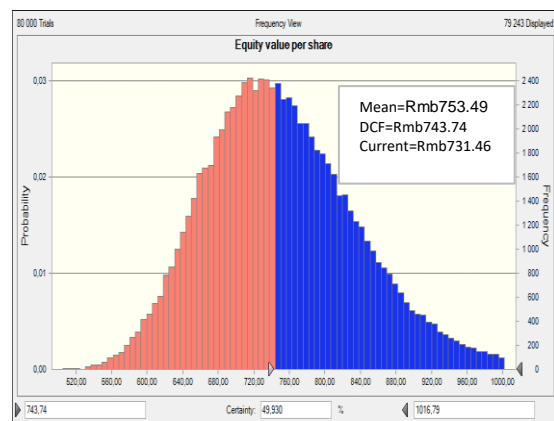
9. Montecarlos Simulation

For the Monte Carlo simulation, we used the Crystal Ball Software, covering a total of 80,000 trials. We focused on testing the 4 items which are Beta, market risk premium (MRP), risk free rate (RF) and the terminal growth rate (g). We believe these items have some impact on Kweichow Moutai's price target.

With a confidence level of 95.0%, the Monte Carlo simulation mean price target was Rmb 753.49, a median of Rmb 745.12, and a Rmb 88.62 associated standard deviation (Figure 26). The results conclude that there is a 95% probability that the YE18 price target for the Kweichow Moutai is between RMB476.19 and Rmb1,389.61. The mean of the price target by the Monte Carlo simulation is representing an Upside Potential of 1.87% (Table 28), which is near the price target computed by the DCF valuation of Rmb 744.19.

According to the results obtained, there is 95% probability of YE18 Kweichow Moutai's price be between Rmb 476.19 and Rmb 1389.61, which means that there is less than 5.0% chance of one of the identified variables trigger a change in the recommendation to hold.

Figure 26 Monte Carlo Distribution



Source: Company data & Author

To perform the Monte Carlo simulation analysis a normal distribution was assumed for all the inputs and a respective standard deviation of 0.2% for the terminal growth rates, of 0.07% for Beta, of 0.6% for market risk premium, and of 0.37% for risk free rate.

10. Investment Risks

Sales risk | (SR)

Slower-than expected high-end spirit growth: Macro economic slowdown could result in lower business entertainment demand and slower income growth among consumers, which would pose a downside risk to our investment case. Domestically, the competition in the Baijiu industry, as a matter of fact, is the band competition. Although, the high-end liquors such as Moutai and Wuliangye are expected to dominant the industry, baijiu as a alcohol spirit, hardly can be drunk by people every day as a necessary good. Thus, sales risk is medium.

Raw material risk | (RM)

The raw materials are sorghum and wheat produced in the base of Moutai Town. The origin of Moutai wine belongs to plateau geology, and the thin soil layer makes the planting production easy to adversely affect the environment. Given the fact that output of cereals has been increasing year by year. Even though the price of cereal has increased slightly due to the inflation and underproduction in 2016, companies could effectively shift this risk to its consumers due to their pricing power. Thus, the supply risk of raw material is minimal.

Water quality risk | (WQ)

The superior quality of Moutai comes from a unique geographical climate, and water quality is the key to winemaking. Moutai is brewed from the water Source of Chishui River. Mainly due to the monopoly nature of resources formed by the unique microbial environment in the Chishui River Basin, the soil has high sandy and gravel content, and the soil is knotted. The ecological management of the Chishui River Basin is expected to expand the scope of the drowning water, which will guarantee the sustainable growth of the Moutai base wine production capacity. However, if the river is polluted, the production of Moutai can shrink and probably generate a brand trust crisis. So, the water quality risk is medium.

Tougher regulation on alcohol consumption | (AR)

The high-end Baijiu is very popular among the public officials and militaries. If the government were to impose tougher and more widespread policies on alcohol use by government officials or even by SOE employees (on official business), there could be a dampening effect on high end alcohol demand. But since the president Mr. Xi prohibit baijiu in the army and combat corruption, the sales of high-end shocked in the past. Before 2015, the revenue growth is stably constant respectively 3.7%in 2014 and 3.84% in 2015. After the consumption upgrading from 2016, the growth rate of sales was 18.95% in 2016 and 49.76% in 2017. So, the political regulation risk is still the most significant one for high-end baijiu in China. Therefore, the political regulatory risk is supposed to be high.

Fake wine imitation risk | (FW)

Attracted by the high profit, some small baijiu company may make effect to duplicate the fake Moutai sprit for chasing the considerable income. This behavior not only concern customers' health problem, but also harm the interest of the Kweichow Moutai company. In realistic, it's difficult for Kweichow Moutai to Resist and combat inferior counterfeiting sprit. This risk can be concerned to high.

Table 28 Monte Carlo Price Percentiles

Percentile	Forecast values	Upside Potencial
0%	476.19	-34.90%
10%	647.91	-11.42%
20%	678.89	-7.19%
30%	702.83	-3.91%
40%	724.01	-1.02%
50%	745.12	1.87%
60%	767.05	4.87%
70%	792.33	8.32%
80%	823.39	12.57%
90%	869.18	18.83%
100%	1389.61	89.98%

Source: Crystal Ball software Author

Exchange rate risk | (ER)

As we have a conclusion that Chinese Baijiu companies take the same strategy that mainly focus on the Chinese market to expand market share, instead of exploration to international market. Combined with purchasing raw-material domestically, exchange rate fluctuations are low risks for liquor industry.

Interest rate risk | (IR)

The average debt/asset ratio increased from 5.0% to 7.8% in the past five years, even though QE is popular in China since 2008. Thus, the expected increasing interests will not pose high risks on the liquor industry.

Tax policy | (TP)

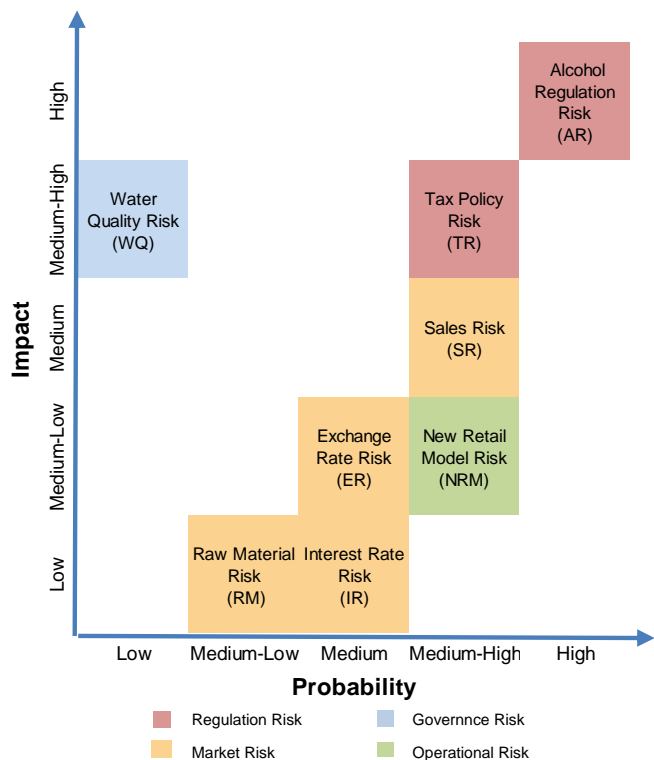
From 2001 onwards, the state implemented a double standard levying consumption tax policy on liquor enterprises. The liquor company pays consumption tax 1RMB/kg plus from 20% of the sales price. In the past the liquor could avoid tax by setting SPE. But from 2009, the state administration of tax start 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 is high.

Potential pitfalls of the new retail model | (NRM)

As mentioned above, there are still some problems with Moutai's new retail model, such as poor consumer experience of the app and ongoing speculation by distributors. If these problems are not solved, the benefits of the new retail model would be impaired. Thus the new retail model risk is low.

Figure 27 Risk Matrix

Source: Author



Appendices

Appendix 1: Statement of Financial Position

Kweichow Moutai Co Ltd (600519 CH) - Balance Sheet										
In Millions of CNY	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
12 Months Ending	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Current Assets										
Cash and Equivalents	25,185	27,711	36,801	66,855	87,869	103,065	123,344	146,257	172,175	201,751
Accounts Receivable - Trade	1	4	0.23	0	0	0	0	0	0	0
Inventories	11,837	14,982	18,013	20,622	22,057	28,869	32,796	37,473	43,091	49,904
Other Current Assets	0	0	0	621	38	0	0	0	0	0
Other Receivables (Short-Term)	120	81	48	77	31	120	81	48	77	31
Bill/Notes Receivable	296	1,848	8,579	818	1,222	2,002	2,274	2,599	2,988	3,461
Prepayment/Advance	4,305	2,864	1,478	1,046	791	791	791	791	791	791
Non-Trade Debt & Accrued Interest Receivable	189	81	85	141	241	292	332	379	436	505
Total Current Assets	41,932	47,571	65,005	90,181	112,249	135,138	159,617	187,547	219,558	256,443
Investments										
Fixed Assets										
Construction In Progress-Net	456	3,422	4,895	2,746	2,016	2,016	2,016	2,016	2,016	2,016
Total Fixed Assets	8,523	10,376	11,416	14,453	15,244	16,488	18,214	20,529	23,574	27,520
Engineering Materials	2	0.26	0.26	0	0	2	0.26	0.26	0	0
Noncurrent Assets										
Deferred Income Tax Asset (Long-Term)	825	822	1,155	1,746	1,402	1,584	1,580	1,913	2,504	2,160
Investment Securities Available For Sale	0	4	29	29	29	29	29	29	29	29
Investment Securities Held To Maturity	50	60	0	0	0	0	0	0	0	0
Net Loans	91	31	20	61	33	91	31	20	61	33
Deferred Costs	8	5	199	188	178	178	178	178	178	178
Net Equity Investments In Joint Ventures/Assoc	4	0	0	0	0	0	0	0	0	0
Intangible Assets Excluding Goodwill	3,563	3,583	3,582	3,532	3,459	3,378	3,298	3,217	3,137	3,056
Total Non-Current Assets	13,523	18,302	21,296	22,754	22,361	23,766	25,345	27,903	31,498	34,992
Total Assets	55,454	65,873	86,301	112,935	134,610	158,903	184,962	215,450	251,056	291,435
Current Liabilities										
Accounts Payable - Trade	285	708	881	1,041	992	1,298	1,475	1,685	1,938	2,244
Short-Term Borrowings	0	63	0	0	0	0	0	0	0	0
Accrued Compensation/Postretirement Obligation	260	989	975	1,629	1,902	2,279	2,589	2,958	3,402	3,940
Interest Accrued/Payable	27	15	27	34	23	27	15	27	34	23
Dividends Accrued/Payable	0	0	0	0.00	0.00	0	0	0	0	0
Income Taxes Accrued/Payable	0	0	2,516	0	0	0	0	0	0	0
Customer Deposits/Advances (Short-Term)	3,045	1,476	8,262	17,541	14,429	17,725	20,136	23,008	26,458	30,641
Other Payables	1,605	1,232	1,423	1,725	3,040	3,574	4,060	4,639	5,335	6,179
Current Tax Liabilities	3,312	2,105	2,516	4,272	7,726	7,894	8,968	10,247	11,783	13,646
Total Deposit & Due to Financial Institutions	2,773	3,956	5,968	10,779	10,463	10,190	10,175	10,190	10,331	10,064
ST Borrowing - Prior Year	0	0	63	0	0	0	0	0	0	0
Dividend Payable - Prior Year	0	0	0	0	0	0	0	0	0	0
Total Current Liabilities	11,307	10,544	20,052	37,020	38,575	42,988	47,419	52,756	59,281	66,736
Non Current Liabilities										
Special Item With Partial Reserve Character	18	18	16	16	16	16	16	16	16	16
Total Noncurrent Liabilities	18	18	16	16	16	16	16	16	16	16
Total Liabilities	11,325	10,562	20,067	37,036	38,590	43,004	47,435	52,771	59,281	66,736
Stockholder Equity										
Minority/Non Controlling Int (Stckhldrs Eqty)	1,507	1,881	2,308	3,004	4,568	5,053	5,736	6,617	7,639	8,722
Accumulated Other Comprehensive Income	0	-1	-13	-11	-7	0	-1	-13	-11	-7
Retained Earnings (Accumulated Deficit)	35,975	45,566	54,879	62,718	80,011	97,328	116,802	139,186	165,055	194,559
Total Shareholders Equity	44,129	55,311	66,234	75,899	96,020	115,899	137,527	162,679	191,775	224,698
Total Reserves	13	99	218	421	601	515	584	674	778	889
Cumulative Translation Adjustment	—	-1	—	—	—	—	—	—	—	—
Total Reserve	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
Statutory And Discretionary Reserves	4,221	5,249	6,211	7,136	8,216	10,373	11,775	13,584	15,683	17,905
Total Share Capital	1,038	1,142	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
Total Shareholders Equity Excluding Minority	42,622	53,430	63,926	72,894	91,452	110,847	131,792	156,062	184,136	215,976
Total Liabilities and Shareholders Equity	55,454	65,873	86,301	112,935	134,610	158,903	184,962	215,450	251,056	291,435

Source: Bloomberg

Appendix 2: Common-Size Statement of Financial Position

Kweichow Moutai Co Ltd (600519 CH) - Balance Sheet Common Size										
In Millions of CNY	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
12 Months Ending	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Current Assets										
Cash and Equivalents	45.4%	42.1%	42.6%	59.2%	65.3%	64.9%	66.7%	67.9%	68.6%	69.2%
Accounts Receivable - Trade	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Inventories	21.3%	22.7%	20.9%	18.3%	16.4%	18.2%	17.7%	17.4%	17.2%	17.1%
Other Current Assets	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Receivables (Short-Term)	0.2%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Bill/Notes Receivable	0.5%	2.8%	9.9%	0.7%	0.9%	1.3%	1.2%	1.2%	1.2%	1.2%
Prepayment/Advance	7.8%	4.3%	1.7%	0.9%	0.6%	0.5%	0.4%	0.4%	0.3%	0.3%
Non-Trade Debt & Accrued Interest Receivable	0.3%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Total Current Assets	75.6%	72.2%	75.3%	79.9%	83.4%	85.0%	86.3%	87.0%	87.5%	88.0%
Investments										
Fixed Assets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction In Progress-Net	0.8%	5.2%	5.7%	2.4%	1.5%	1.3%	1.1%	0.9%	0.8%	0.7%
Total Fixed Assets	15.4%	15.8%	13.2%	12.8%	11.3%	10.4%	9.8%	9.5%	9.4%	9.4%
Engineering Materials										
Noncurrent Assets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Deferred Income Tax Asset (Long-Term)	1.5%	1.2%	1.3%	1.5%	1.0%	1.0%	0.9%	0.9%	1.0%	0.7%
Investment Securities Available For Sale	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment Securities Held To Maturity	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Loans	0.2%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Deferred Costs	0.0%	0.0%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Net Equity Investments In Joint Ventures/Assoc	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Intangible Assets Excluding Goodwill	6.4%	5.4%	4.2%	3.1%	2.6%	2.1%	1.8%	1.5%	1.2%	1.0%
Total Non-Current Assets	24.4%	27.8%	24.7%	20.1%	16.6%	15.0%	13.7%	13.0%	12.5%	12.0%
Total Assets	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Current Liabilities										
Accounts Payable - Trade	0.5%	1.1%	1.0%	0.9%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%
Short-Term Borrowings	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accrued Compensation/Postretirement Obligation	0.5%	1.5%	1.1%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
Interest Accrued/Payable	0.5%	1.5%	1.1%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
Dividends Accrued/Payable	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Income Taxes Accrued/Payable	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Customer Deposits/Advances (Short-Term)	5.5%	2.2%	9.6%	15.5%	10.7%	11.2%	10.9%	10.7%	10.5%	10.5%
Other Payables	2.9%	1.9%	1.6%	1.5%	2.3%	2.2%	2.2%	2.2%	2.1%	2.1%
Current Tax Liabilities	6.0%	3.2%	2.9%	3.8%	5.7%	5.0%	4.8%	4.8%	4.7%	4.7%
Total Deposit & Due to Financial Institutions	5.0%	6.0%	6.9%	9.5%	7.8%	6.4%	5.5%	4.7%	4.1%	3.5%
ST Borrowing - Prior Year	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Dividend Payable - Prior Year	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Current Liabilities	20.4%	16.0%	23.2%	32.8%	28.7%	27.1%	25.6%	24.5%	23.6%	22.9%
Non Current Liabilities										
Special Item With Partial Reserve Character	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Noncurrent Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Liabilities	20.4%	16.0%	23.3%	32.8%	28.7%	27.1%	25.6%	24.5%	23.6%	22.9%
Stockholder Equity										
Minority/Non Controlling Int (Stckhldrs Eqty)	2.7%	2.9%	2.7%	2.7%	3.4%	3.2%	3.1%	3.1%	3.0%	3.0%
Accumulated Other Comprehensive Income	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retained Earnings (Accumulated Deficit)	64.9%	69.2%	63.6%	55.5%	59.4%	61.2%	63.1%	64.6%	65.7%	66.8%
Total Shareholders Equity	79.6%	84.0%	76.7%	67.2%	71.3%	72.9%	74.4%	75.5%	76.4%	77.1%
Total Reserves	0.0%	0.1%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%
Cumulative Translation Adjustment	—	-61.9%	—	—	—	0.0%	0.0%	0.0%	0.0%	0.0%
Total Reserve	2.5%	2.1%	1.6%	1.2%	1.0%	0.9%	0.7%	0.6%	0.5%	0.5%
Statutory And Discretionary Reserves	7.6%	8.0%	7.2%	6.3%	6.1%	6.5%	6.4%	6.3%	6.2%	6.1%
Total Share Capital	1.9%	1.7%	1.5%	1.1%	0.9%	0.8%	0.7%	0.6%	0.5%	0.4%
Total Shareholders Equity Excluding Minority	76.9%	81.1%	74.1%	64.5%	67.9%	69.8%	71.3%	72.4%	73.3%	74.1%
Total Liabilities and Shareholders Equity	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Bloomberg&Author

Appendix 3: Income Statement

Kweichow Moutai Co Ltd (600519 CH) - Income Statement										
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
12 Months Ending	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Revenue	28,280	29,428	29,998	33,646	52,659	68,919	78,295	89,461	102,873	119,137
Sales & Services Revenue	28,131	28,784	29,205	32,332	49,764	65,024	72,958	82,213	93,095	106,001
Financing Revenue	149	643	787	1,293	2,845	3,831	5,264	7,167	9,686	13,031
Other Revenue	0	1	6	21	49	64	72	81	92	105
Cost of Revenue	2,230	2,398	2,613	3,533	6,076	8,109	9,177	10,445	11,951	13,744
Cost of Goods & Services	1,395	1,405	1,537	2,220	4,823	6,828	7,765	8,845	10,090	11,529
Cost of Financing Revenue	36	59	74	123	135	286	394	536	724	974
Depreciation & Amortization	357	455	498	592	693	505	529	575	647	751
Research & Development	442	478	504	598	424	489	489	489	489	489
Gross Profit	26,050	27,030	27,385	30,113	46,583	60,811	69,118	79,016	90,922	105,394
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Operating Expenses	4,691	5,054	5,297	5,881	7,699	11,323	12,864	14,694	16,913	19,563
Selling, General & Admin	4,487	4,746	4,947	5,526	7,273	10,685	12,139	13,870	15,949	18,471
<i>Selling & Marketing</i>	<i>1,858</i>	<i>1,675</i>	<i>1,485</i>	<i>1,681</i>	<i>2,986</i>	<i>3,836</i>	<i>4,358</i>	<i>4,979</i>	<i>5,726</i>	<i>6,631</i>
<i>General & Administrative</i>	<i>2,629</i>	<i>3,071</i>	<i>3,462</i>	<i>3,845</i>	<i>4,287</i>	<i>6,849</i>	<i>7,781</i>	<i>8,891</i>	<i>10,224</i>	<i>11,840</i>
Research & Development	11	10	8	12	11	11	10	8	12	11
Depreciation & Amortization	195	298	343	331	422	630	715	817	940	1,088
Prov For Doubtful Accts	-3	1	0	1	3	-3	1	0	1	3
Other Operating Expense	1	0	0	11	-11	1	0	0	11	-11
EBITDA	21,912	22,730	22,929	25,156	40,000	49,487	56,253	64,322	74,009	85,831
Depreciation	520.5	675.3	761.5	842.7	1,035.1	1,054	1,164	1,312	1,506	1,759
Amortization of Intangibles	31.6	77.6	79.9	80.5	80.5	80.5	80.5	80.5	80.5	80.5
EBIT	21,359	21,977	22,088	24,232	38,884	49,487	56,253	64,322	74,009	85,831
Non-Operating (Income) Loss	-325	6	90	246	151	343	382	429	487	557
Interest Expense, Net	-433	-127	-73	-34	-60	-44	-58	-74	-91	-113
<i>Interest Expense</i>	<i>0</i>	<i>10</i>	<i>41</i>	<i>38</i>	<i>1</i>	<i>27</i>	<i>27</i>	<i>27</i>	<i>27</i>	<i>27</i>
<i>Interest Income</i>	<i>433</i>	<i>137</i>	<i>114</i>	<i>71</i>	<i>61</i>	<i>71</i>	<i>85</i>	<i>101</i>	<i>119</i>	<i>139</i>
Other Investment (Inc) Loss	0	0	0	0	0	0	0	0	0	0
Foreign Exch (Gain) Loss	0	0	0	—	0	0	0	0	0	0
(Income) Loss from Affiliates	0	0	0	0	0	0	0	0	0	0
Other Non-Op (Income) Loss	108	133	162	280	211	387	440	503	578	670
EBT, Pretax Income (Loss), Adjusted	21,684	21,971	21,998	23,986	38,733	49,144	55,871	63,893	73,523	85,274
Abnormal Losses (Gains)	252	88	-3	28	-7	252	88	-3	28	-7
Disposal of Assets	9	85	0	2	3	9	85	0	2	3
Legal Settlement	243	-2	-3	-7	-11	243	-2	-3	-7	-11
Other Abnormal Items	0	5	-1	33	1	0	5	-1	33	1
Pretax Income (Loss), GAAP	21,432	21,882	22,002	23,958	38,740	48,892	55,783	63,896	73,495	85,281
Income Tax Expense (Benefit)	5,467	5,613	5,547	6,027	9,734	12,478	14,447	16,211	18,439	22,425
Current Income Tax	5,649	5,609	5,880	6,617	9,390	12,659	14,444	16,544	19,030	22,082
Deferred Income Tax	-182	4	-334	-590	344	-182	4	-334	-590	344
Income (Loss) from Cont Ops	15,965	16,269	16,455	17,931	29,006	36,414	41,336	47,686	55,055	62,856
Discontinued Operations	0	0	0	0	0	0	0	0	0	0
XO & Accounting Changes	0	0	0	0	0	0	0	0	0	0
Income (Loss) Incl. MI	15,965	16,269	16,455	17,931	29,006	36,414	41,336	47,686	55,055	62,856
Minority Interest	828	920	952	1,212	1,927	2,224	2,524	2,912	3,362	3,838
Net Income, GAAP	15,137	15,350	15,503	16,718	27,079	34,191	38,812	44,774	51,693	59,018
Preferred Dividends	0	0	0	0	0	0	0	0	0	0
Other Adjustments	0	0	0	0	0	0	0	0	0	0
Net Income Avail to Common, GAAP	15,137	15,350	15,503	16,718	27,079	34,191	38,812	44,774	51,693	59,018

Source: Bloomberg & Author

Appendix 4: Common-size of Income Statement

Kweichow Moutai Co Ltd (600519 CH) - Income Statement Common-Size										
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
12 Months Ending	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Revenue	28,280	29,428	29,998	33,646	52,659	68,919	78,295	89,461	102,873	119,137
Sales & Services Revenue	99.5%	97.8%	97.4%	96.1%	94.5%	94.3%	93.2%	91.9%	90.5%	89.0%
Financing Revenue	0.5%	2.2%	2.6%	3.8%	5.4%	5.6%	6.7%	8.0%	9.4%	10.9%
Other Revenue	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Cost of Revenue	7.9%	8.1%	8.7%	10.5%	11.5%	11.8%	11.7%	11.7%	11.6%	11.5%
Cost of Goods & Services	4.9%	4.8%	5.1%	6.6%	9.2%	9.9%	9.9%	9.9%	9.8%	9.7%
Cost of Financing Revenue	0.1%	0.2%	0.2%	0.4%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%
Depreciation & Amortization	1.3%	1.5%	1.7%	1.8%	1.3%	0.7%	0.7%	0.6%	0.6%	0.6%
Research & Development	1.6%	1.6%	1.7%	1.8%	0.8%	0.7%	0.6%	0.5%	0.5%	0.4%
Gross Profit	92.1%	91.9%	91.3%	89.5%	88.5%	88.2%	88.3%	88.3%	88.4%	88.5%
Other Operating Income	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating Expenses	16.6%	17.2%	17.7%	17.5%	14.6%	16.4%	16.4%	16.4%	16.4%	16.4%
Selling, General & Admin	15.9%	16.1%	16.5%	16.4%	13.8%	15.5%	15.5%	15.5%	15.5%	15.5%
Selling & Marketing	6.6%	5.7%	5.0%	5.0%	5.7%	5.6%	5.6%	5.6%	5.6%	5.6%
General & Administrative	9.3%	10.4%	11.5%	11.4%	8.1%	9.9%	9.9%	9.9%	9.9%	9.9%
Research & Development	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Depreciation & Amortization	0.7%	1.0%	1.1%	1.0%	0.8%	0.9%	0.9%	0.9%	0.9%	0.9%
Prov For Doubtful Accts	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Operating Expense	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EBITDA	77.5%	77.2%	76.4%	74.8%	76.0%	71.8%	71.8%	71.9%	71.9%	72.0%
Depreciation	1.8%	2.3%	2.5%	2.5%	2.0%	1.5%	1.5%	1.5%	1.5%	1.5%
Amortization of Intangibles	0.1%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%
EBIT	75.5%	74.7%	73.6%	72.0%	73.8%	71.8%	71.8%	71.9%	71.9%	72.0%
Non-Operating (Income) Loss	-1.1%	0.0%	0.3%	0.7%	0.3%	0.5%	0.5%	0.5%	0.5%	0.5%
Interest Expense, Net	-1.5%	-0.4%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Interest Expense	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Interest Income	290.7%	21.4%	14.5%	5.5%	2.1%	1.9%	1.6%	1.4%	1.2%	1.1%
Other Investment (Inc) Loss	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Foreign Exch (Gain) Loss	0.0%	0.0%	0.0%	—	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(Income) Loss from Affiliates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Non-Op (Income) Loss	0.4%	0.5%	0.5%	0.8%	0.4%	0.6%	0.6%	0.6%	0.6%	0.6%
EBT, Pretax Income (Loss), Adjusted	76.7%	74.7%	73.3%	71.3%	73.6%	71.3%	71.4%	71.4%	71.5%	71.6%
Abnormal Losses (Gains)	0.9%	0.3%	0.0%	0.1%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%
Disposal of Assets	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Legal Settlement	0.9%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%
Other Abnormal Items	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pretax Income (Loss), GAAP	75.8%	74.4%	73.3%	71.2%	73.6%	70.9%	71.2%	71.4%	71.4%	71.6%
Income Tax Expense (Benefit)	19.3%	19.1%	18.5%	17.9%	18.5%	18.1%	18.5%	18.1%	17.9%	18.8%
Current Income Tax	20.0%	19.1%	19.6%	19.7%	17.8%	18.4%	18.4%	18.5%	18.5%	18.5%
Deferred Income Tax	-0.6%	0.0%	-1.1%	-1.8%	0.7%	-0.3%	0.0%	-0.4%	-0.6%	0.3%
Income (Loss) from Cont Ops	56.5%	55.3%	54.9%	53.3%	55.1%	52.8%	52.8%	53.3%	53.5%	52.8%
Discontinued Operations	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
XO & Accounting Changes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Income (Loss) Incl. MI	56.5%	55.3%	54.9%	53.3%	55.1%	52.8%	52.8%	53.3%	53.5%	52.8%
Minority Interest	2.9%	3.1%	3.2%	3.6%	3.7%	3.2%	3.2%	3.3%	3.3%	3.2%
Net Income, GAAP	53.5%	52.2%	51.7%	49.7%	51.4%	49.6%	49.6%	50.0%	50.2%	49.5%
Preferred Dividends	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Adjustments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income Avail to Common, GAAP	53.5%	52.2%	51.7%	49.7%	51.4%	49.6%	49.6%	50.0%	50.2%	49.5%

Source: Bloomberg & Author

Appendix 5: Cash Flow Statement

Kweichow Moutai Co Ltd (600519 CH) - Cash Flow Statement						
In Millions of CNY	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
12 Months Ending	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Operating Activities	22,153	34,718	42,998	49,427	56,997	65,133
+EBIT	38,884	49,487	56,253	64,322	74,009	85,831
+D&A	1,116	1,134	1,244	1,392	1,587	1,839
-Income Tax	9,734	12,478	14,447	16,211	18,439	22,425
-ΔNWC	-4,064	3,426	53	76	160	112
Investment Activities	-1,884	-2,356	-2,946	-3,683	-4,605	-5,758
-CAPEX	-1,906	-2,379	-2,970	-3,708	-4,631	-5,785
+Other Inv.	21	23	24	25	26	27
Financing Activities	-8,680	-17,166	-19,773	-22,831	-26,474	-29,799
-Interest paid	-151	-343	-382	-429	-487	-557
-Dividends	-8,845	-17,095	-19,406	-22,387	-25,847	-29,509
-ΔDebt	-316	-273	-15	15	141	-267
Change in Cash	11,589	15,196	20,279	22,913	25,918	29,576
Beginning	66,855	87,869	103,065	123,344	146,257	172,175
Ending	87,869	103,065	123,344	146,257	172,175	201,751

Source: Bloomberg & Author

...

Appendix 6: Calculation of D&A and Net Working Capital

In Millions of CNY	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Amortizations	81	81	81	81	81	81
Depreciations PP&E	1,035	1,054	1,164	1,312	1,506	1,759
D&A	1,116	1,134	1,244	1,392	1,587	1,839
Additions To Fixed And Intangible Assets	-1,889	-2,361	-2,951	-3,688	-4,611	-5,763
Other Cash Paid Related to Investment	-17	-18	-19	-20	-21	-22
CAPEX Total	-1,906	-2,379	-2,970	-3,708	-4,631	-5,785

Source: Bloomberg&Author

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Current Assets	24,343	32,073	36,273	41,290	47,383	54,691
Inventories	22,057	28,869	32,796	37,473	43,091	49,904
Receivables	1,494	2,413	2,687	3,026	3,501	3,997
Other assets	791	791	791	791	791	791
Current Liabilities	26,187	30,492	34,640	39,580	45,514	52,709
Payables	4,032	4,873	5,535	6,325	7,273	8,423
Income Tax Oblig.	7,726	7,894	8,968	10,247	11,783	13,646
Other liabilities	14,429	17,725	20,136	23,008	26,458	30,641
NWC	-1,844	1,581	1,634	1,710	1,869	1,982
ΔNWC	-4,064	3,426	53	76	160	112

Source: Bloomberg&Author

...

...

Appendix 7: Forecasting Assumptions - Balance Sheet

Balance Sheet Assumptions							
Balance-sheet	Unit	Assumptions					Description
		2018F	2019F	2020F	2021F	2022F	
Current Assets							
Accounts Receivable - Trade	yuan	0	0	0	0	0	Equal to 2017 nominal value.
Inventories	%	41.9%	41.9%	41.9%	41.9%	41.9%	For moutai, 20%-25% of total product would be storage for making the wine for
Other Current Assets	yuan	37.54	37.54	37.54	37.54	37.54	Equal to 2017 nominal value.
Other Receivables (Short-Term)	yuan	119.57	80.89	48.22	77.23	31.32	We assumed this item is in circle with last 5 years.
Bill/Notes Receivable	%	2.9%	2.9%	2.9%	2.9%	2.9%	Based on a 5 year historical average as a percentage of total revenue.
Prepayment/Advance	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Non-Trade Debt & Accrued Interest Receivable	%	0.4%	0.4%	0.4%	0.4%	0.4%	Based on a 5 year historical average as a percentage of total revenue.
Non-Current Assets							
Construction In Progress-Net	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Engineering Materials	yuan	1.73	0.26	0.26	0.00	0.00	We assumed this item is in circle with last 5 years.
Investment Securities Available For Sale	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Investment Securities Held To Maturity	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Net Loans	yuan	90.53	30.81	19.50	60.83	33.15	We assumed this item is in circle with last 5 years.
Deferred Costs	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Current Liabilities							
Accounts Payable - Trade	%	1.9%	1.9%	1.9%	1.9%	1.9%	Based on the year 2017 historical amount as a percentage of total revenue.
Short-Term Borrowings	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Accrued Compensation/Postretirement Obligation	%	3.3%	3.3%	3.3%	3.3%	3.3%	Based on a 5 year historical average as a percentage of total revenue.
Interest Accrued/Payable	yuan	15.4	27.4	34.5	23.4	0.0	We assumed this item is in circle with last 5 years.
Customer Deposits/Advances (Short-Term)	%	25.7%	25.7%	25.7%	25.7%	25.7%	Based on a 5 year historical average as a percentage of total revenue.
Other Payables	%	5.2%	5.2%	5.2%	5.2%	5.2%	Based on a 5 year historical average as a percentage of total revenue.
Current Tax Liabilities	%	11.5%	11.5%	11.5%	11.5%	11.5%	Based on a 5 year historical average as a percentage of total revenue.
Non Current Liabilities							
Special Item With Partial Reserve Character	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Stockholder Equity							
Minority/Non Controlling Int (Stckhldrs Eqty)	%	14.8%	14.8%	14.8%	14.8%	14.8%	Based on a 5 year historical average as a percentage of net income.
Accumulated Other Comprehensive Income	yuan	0.0	-0.6	-13.0	-11.2	-7.4	We assumed this item is in circle with last 5 years.
Total Reserve	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.
Statutory And Discretionary Reserves	%	30.3%	30.3%	30.3%	30.3%	30.3%	Based on the year 2017 historical amount as a percentage of net income.
Total Share Capital	%	0.0%	0.0%	0.0%	0.0%	0.0%	Equal to 2017 nominal value.

Source: Company data & Author

Appendix 8: Forecasting Assumptions- Income statement

Income statement assumptions							
Income statement	Unit	Assumptions					Description
		2018F	2019F	2020F	2021F	2022F	
GENERAL							
Inflation rate	%	2.48%	2.62%	2.70%	2.80%	2.83%	Chinese expected inflation rate by Statistics
REVENUE							
Moutai sprit sales	%	15.00%	15.00%	15.00%	15.00%	15.00%	2010-2017 The revenue for industry can be 9.52% YOY on average, Maotai take 10.8% of the market. A 9.52% YOY rate was assumed based on the average revenue level of chinese liquor industry .
Moutai series sprit sales	%	5.00%	5.00%	5.00%	5.00%	5.00%	Since 2015, the company has begun to expand its range of wines and expand the product portfolio based on the consolidation of its core brand. According to the last 3 years rapid increase 55.18% per year and the average industry revenue annually increase rate 9.52% ,we take the average of these 2 figures and assumed 32.35% as the stable revenue increase rate.
Other revenue	%	0.10%	0.10%	0.10%	0.10%	0.10%	We assumed the other revenue take 0.10% of the operating revenue.
Financing Revenue	%	3.72%	4.27%	4.90%	5.63%	6.46%	among last 5 years ,the percentage increased in a rate of 14.8 % on
COST							
Cost of Moutai sprit	%	6.38%	6.38%	6.38%	6.38%	6.38%	For Moutai the cost of sprit is considered stable,we assumed the cost over revenue is 6.38% , which is the average amount of the last 3 year level.
Cost of Moutai series sprit	%	45.44%	45.44%	45.44%	45.44%	45.44%	For Moutai the cost of series sprit is considered stable,we assumed the cost over revenue is 45.44% ,which is the average amount of the last 3 year level.
Cost of Financing Revenue	%	7.48%	7.48%	7.48%	7.48%	7.48%	Based on the last 5 year, we assumed that the Cost of Financing Revenue took 7.48% of the financial revenue
Research & Development	Yuan	489.19	489.19	489.19	489.19	489.19	Last 5 years, the average R&D expense is 489.19 yuan on average with the highest at 589.06 yuan in 2016 and the lowest at 424. 70 yuan in 2017. we assumed that the R&D expense would be stable at 489.19 yuan throughout the coming years.
Selling & Marketing	%	5.57%	5.57%	5.57%	5.57%	5.57%	Based on a 5 year historical average as a percentage of revenue.
General & Administrative	%	9.94%	9.94%	9.94%	9.94%	9.94%	Based on a 5 year historical average as a percentage of revenue.
Research & Development	yuan	10.56	9.71	7.52	11.54	11.18	We assumed the R&D is in circle with last 5 years.
Depreciation	%	6.39%	6.39%	6.39%	6.39%	6.39%	Based on the 5 years historical average of percentage of total fixed assets .
Amotization	%	2.28%	2.28%	2.28%	2.28%	2.28%	Based on the 5 years historical average of percentage of intangible asset.
Prov For Doubtful Accts	yuan	-2.9	0.6	-0.3	1.3	2.7	We assumed the Prov For Doubtful Accts is in circle with last 5 years.
Other Operating Expense	yuan	0.9	-0.1	-0.3	11.1	-10.7	We assumed the Other Operating Expense is in circle with last 5 years.
Interest Expense	%	0.27%	0.27%	0.27%	0.27%	0.27%	Based on the cost of debt
interst income	%	0.07%	0.07%	0.07%	0.07%	0.07%	According to the target of the company, company is expanding the business to the financial market. we clculated the portion 0.07% based on the recent year amount as a percentage of cash and cash equivilant.
Other Non-Op (Income) Loss	yuan	107.7	133.2	162.3	280.4	210.9	We assumed this item is in circle with last 5 years.
Disposal of Assets	yuan	9.0	85.1	0.0	1.9	3.3	We assumed this item is in circle with last 5 years.
Legal Settlement	yuan	243.4	-2.3	-2.7	-6.9	-11.1	We assumed this item is in circle with last 5 years.
Other Abnormal Items	yuan	-0.5	5.4	-0.7	33.1	0.9	We assumed this item is in circle with last 5 years.
Deferred Income Tax	yuan	-181.7	3.8	-333.7	-590.2	343.7	We assumed this item is in circle with last 5 years.
Minority Interest	%	6.11%	6.11%	6.11%	6.11%	6.11%	Based on a 5 year historical average as a percentage of Income (Loss) Including MI.

Source:Company data & Author

Appendix 6: Key Ratios

Kweichow Moutai Co Ltd (600519 CH) - Key Ratios										
In Millions of CNY	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Profitability Ratios										
Gross Margin	92.1%	91.9%	91.3%	89.5%	88.5%	88.2%	88.3%	88.3%	88.4%	88.5%
EBITDA Margin	77.5%	77.2%	76.4%	74.8%	76.0%	71.8%	71.8%	71.9%	71.9%	72.0%
EBIT Margin	75.5%	74.7%	73.6%	72.0%	73.8%	71.8%	71.8%	71.9%	71.9%	72.0%
Pretax Margin	75.8%	74.4%	73.3%	71.2%	73.6%	70.9%	71.2%	71.4%	71.4%	71.6%
Net Income Margin	53.5%	52.2%	51.7%	49.7%	51.4%	49.6%	49.6%	50.0%	50.2%	49.5%
Return on Assets	30.1%	25.3%	20.4%	16.8%	21.9%	23.3%	22.6%	22.4%	22.2%	21.8%
Return on Common Equity	39.4%	32.0%	26.4%	24.4%	33.0%	33.8%	32.0%	31.1%	30.4%	29.5%
Active Ratios										
Accounts Receivable Turnover	109.0	27.4	5.8	7.2	51.6	35.3	30.7	31.3	31.5	31.8
Days Sales Outstanding	3.3	13.3	63.5	51.0	7.1	10.3	11.9	11.7	11.6	11.5
Inventory Turnover	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
Days Inventory Outstanding	1,760.1	2,041.2	2,304.9	1,995.7	1,282.0	1,361.1	1,449.2	1,449.9	1,457.2	1,472.0
Accounts Payable Turnover	14.0	11.2	7.1	6.4	7.4	13.0	9.4	9.6	9.7	9.8
Accounts Payable Turnover Days	26.1	32.7	51.4	57.1	49.4	28.0	38.6	38.1	37.6	37.1
Cash Conversion Cycle	1,737.3	2,021.9	2,317.0	1,989.5	1,239.7	1,343.4	1,422.5	1,423.4	1,431.1	1,446.4
Inventory to Cash Days	1,763.5	2,054.5	2,368.4	2,046.6	1,289.1	1,371.4	1,461.1	1,461.6	1,468.7	1,483.5
Fixed asset turnover		3.1	2.8	2.6	3.5	4.3	4.5	4.6	4.7	4.7
Total asset turnover		0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4
Liquidity Ratio										
Current Ratio	3.71	4.51	3.24	2.44	2.91	3.14	3.37	3.56	3.70	3.84
Quick Ratio	2.24	2.64	1.84	1.81	2.28	2.40	2.61	2.78	2.91	3.03
Cash Ratio	2.23	2.63	1.84	1.81	2.28	2.40	2.60	2.77	2.90	3.02
Solvency ratio										
Total Debt/Equity	6.3%	7.2%	9.0%	14.2%	10.9%	8.8%	7.4%	6.3%	5.4%	4.5%
Total Debt/Capital	5.9%	6.7%	8.3%	12.4%	9.8%	8.1%	6.9%	5.9%	5.1%	4.3%
Total Debt/Total Assets	5.0%	6.0%	6.9%	9.5%	7.8%	6.4%	5.5%	4.7%	4.1%	3.5%
Financial Leverage	4.90	6.24	4.30	3.05	3.49	3.70	3.90	4.08	4.24	4.37

Source: Bloomberg & Author

Appendix 10: Discounted Cash Flow Analysis

Kweichow Moutai Co Ltd (600519 CH) - DCF Analysis						
WACC	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
COST OF EQUITY						
RF	3.68%	3.68%	3.68%	3.68%	3.68%	3.68%
CRP	0.81%	0.81%	0.81%	0.81%	0.81%	0.81%
MRP	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Beta	0.68	0.68	0.68	0.68	0.68	0.68
Cost of equity	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%
COST OF DEBT						
Cost of debt	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
Marginal tax rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
After-tax cost of debt	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
WACC						
Weight of equity	94.09%	93.32%	91.73%	87.56%	90.17%	91.92%
Weight of debt	5.91%	6.68%	8.27%	12.44%	9.83%	8.08%
WACC	8.07%	8.01%	7.87%	7.52%	7.74%	7.89%

Source: Company data & Author

Yuan'000'000	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
EBIT(1-marginal tax rate)	29163	37115	42190	48241	55507	64374
D&A	1116	1134	1244	1392	1587	1839
DNWC	-4064	3426	53	76	160	112
Capex	1906	2379	2970	3708	4631	5785
FCFF	32437	32445	40412	45849	52303	60315

Source: Company data & Author

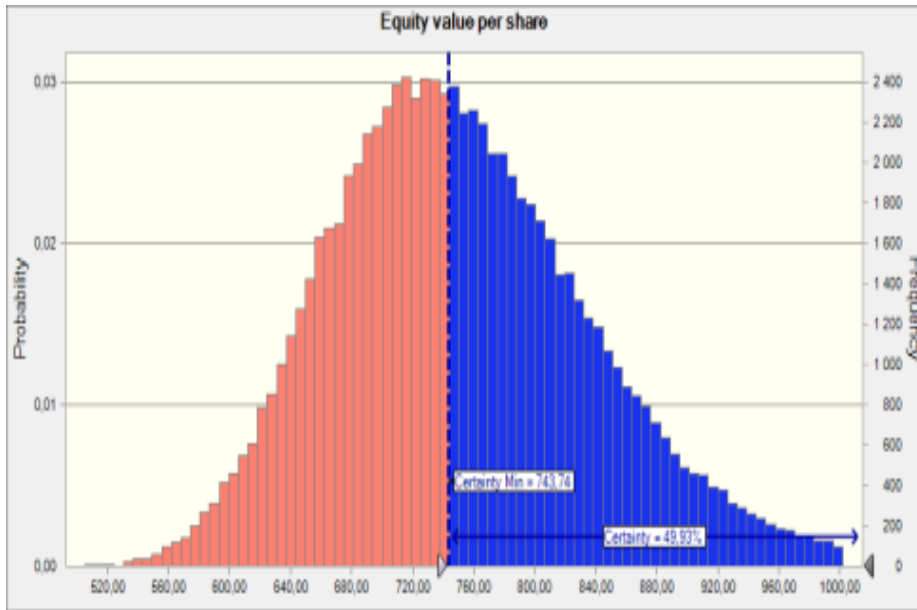
Enterprise Value	Yuan
Terminal growth rate	2.00%
Perpetuity WACC	7.89%
Terminal value (billion)	1044.64
Pv of terminal value(billion)	771.00
NPV of FCFF (billion)	163.58
Enterprise Value(billion)	934.57

Source: Company data & Author

Price target	Yuan
Enterprise value (billion)	934.57
Net debt(billion)	-0.27
Value of equity (billion)	934.85
No. of shares outstanding (million)	1256.20
Equity value per share	744.19
Price at the end 2018	744.19
Price at July,29th 2018	731.46
Upside	1.74%

Source: Company data & Author

Appendix 11: Monte Carlo Simulation



Forecast values

Trials	80,000
Base Case	743.74
Mean	753.49
Median	745.12
Standard Deviation	88.62
Variance	7853.85
Skewness	0.6257
Kurtosis	3.88
Coeff. of Variation	0.1176
Minimum	476.19
Maximum	1389.61
Range Width	913.43
Mean Std. Error	0.31

Source: Crystal Ball Software & Author

Appendix 12: Ownership Structure

Kweichow Moutai top ten shareholders and their stakes in the company (as of June 30, 2018)

Shareholders	Type of shareholders	Number of stakes	% shares
Moutai Group	Alpha A	778,771,955.00	61.99%
HKSCC	Alpha A	90,986,438.00	7.24%
Moutai Technology Development Corp.	Others	27,812,088.00	2.21%
Efunds Asset Mgt.	QFII	12,262,840.00	0.98%
Huijin Asset Mgt.	Others	10,787,300.00	0.86%
China Securities Finance Corp.	Others	6,988,042.00	0.56%
Oppenheimer Funds	QFII	4,173,500.00	0.33%
ICBC Shanghai 50 trading open index securities investment fund	SIF securities investment funds	3,794,454.00	0.30%
XingRmb Asset Mgt.	Others	3,487,220.00	0.28%
GIC Private Ltd.	QFII	2,602,465.00	0.21%

Source: Company data

Appendix 13: Corporate Governance

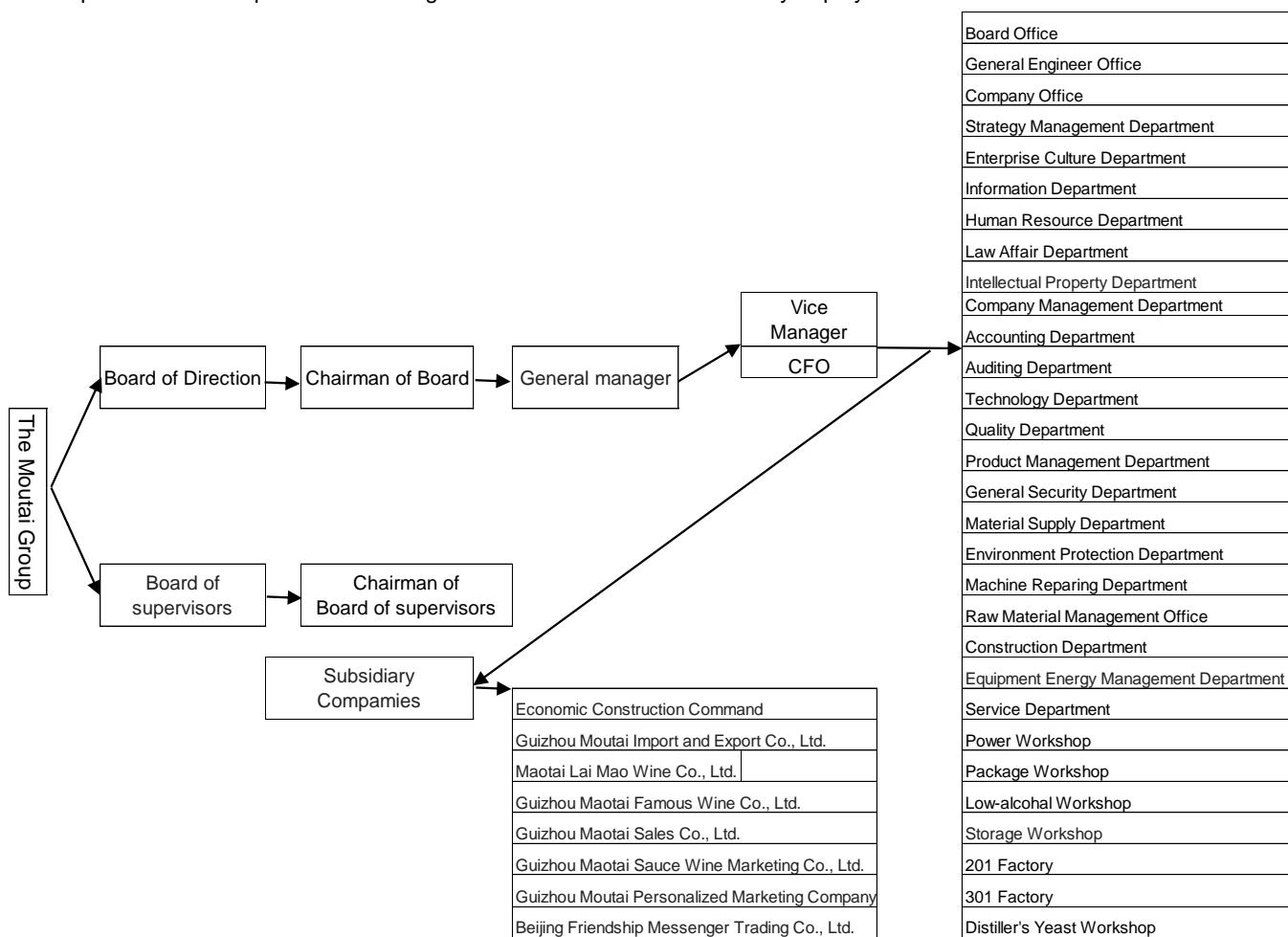
Kweichow Moutai adopts a tapered structure pattern, which exists the characteristics of high management, small, high-level, sharp pyramidal posture.

Advantage:

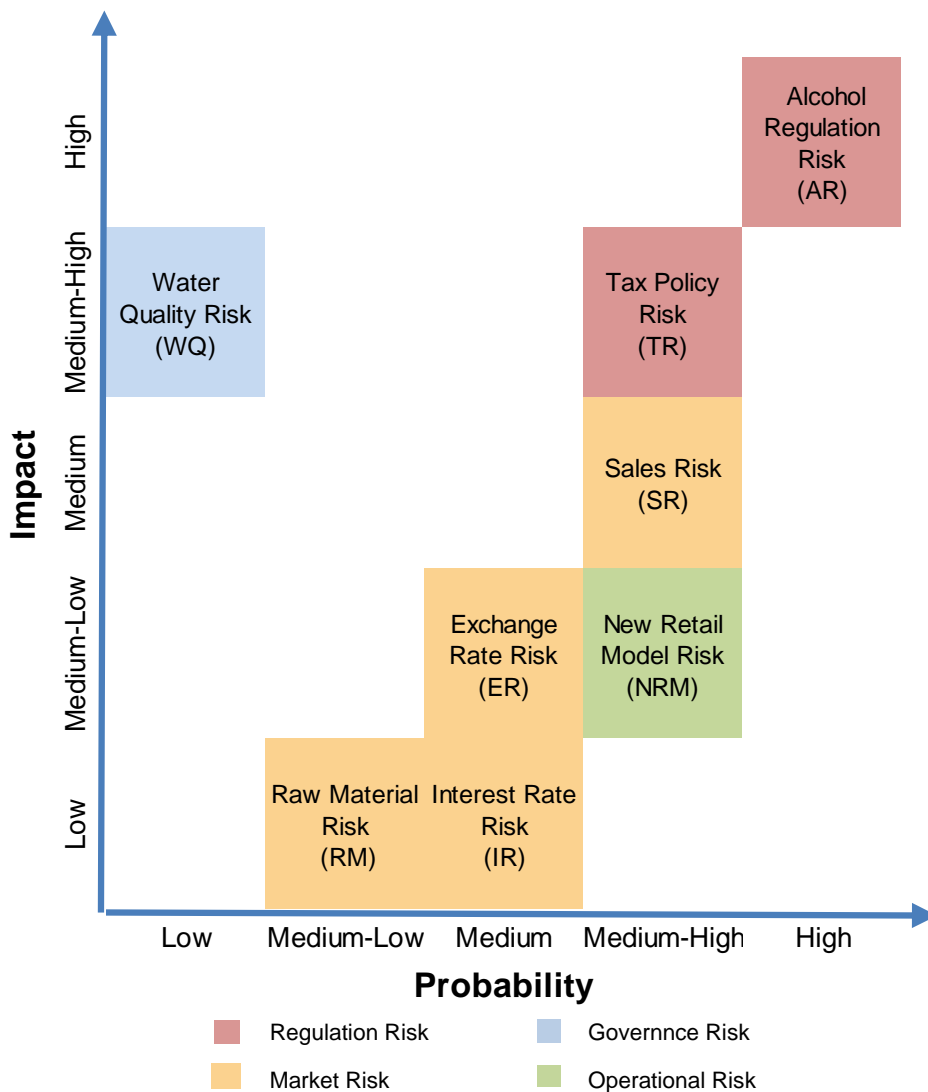
1. The supervisor can fully and effectively manage and supervise the subordinates
2. information transmission is fast, can be used in time
3. subjective management is small, can guide the subordinates

Disadvantage:

1. the information is true in the delivery project
2. the planned control work is complicated
3. The position of the supervisor in the organization is small and it is not easy to play an active role.



Appendix 14: Risk Matrix



Source: Author

Appendix 15: International Rewards

In 1915, the gold medal of the "Panama World Exposition" was awarded.

1985, international gourmet tourism competition

1986 gold medal of the Twelfth International Food Fair in Paris, France

In 1986, Hongkong "Asia Star" packaging award.

In 1987, the Third World Advertising Conference and the first prize of Chinese export advertisements in Hongkong.

In 1989, the first Beijing International Exposition gold medal.

In 1991, the second Beijing International Exposition gold medal.

In 1992, the first international famous wine competition gold medal.

In 1992, the highest gold award of Hongkong International Food Fair.

In 1992 gold medal of the Fourth International Wine Exposition in Tokyo, Japan

In 1992, the packaging of "Han di Moutai" was awarded the highest prize of "world star" international packaging in Paris, France.

In 1993 Bordeaux France wine and Spirits Exhibition Special Award

In 1994, the "Feitian" and "five star" series of Moutai wines were awarded the fifth session.

Gold medal of Asia Pacific International Trade Fair

In 1994, the first gold medal of the 80th anniversary Panama Wine Exposition was held in the United States.

In 2005, the company won the international water resources protection outstanding contribution award.

in 2005, the company won the award of excellence management organization of the international certification Union and China Quality Certification Center.

In 2012, the ninth world wine competition gold medal.

2013 Global Performance Excellence Award

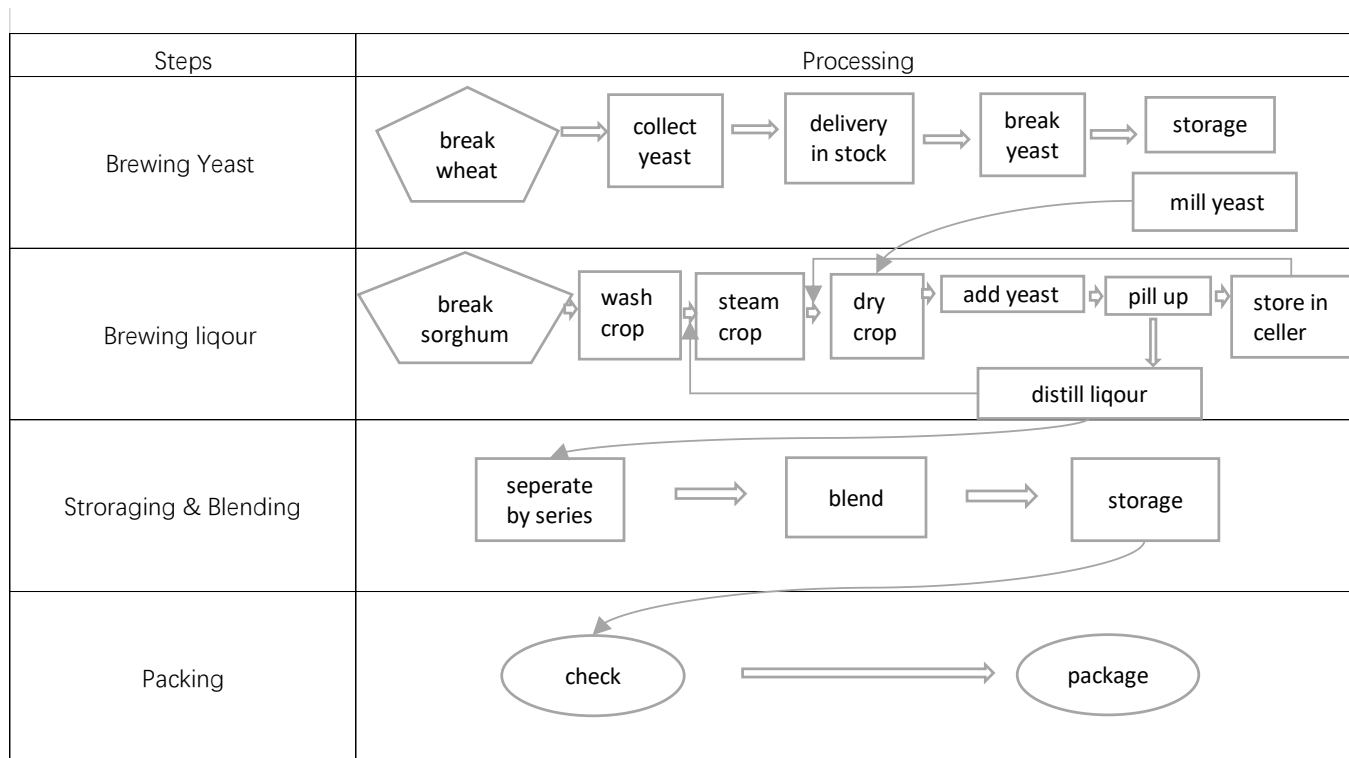
In 2014, the national liquor Moutai was awarded the "Brussels international liquor competition gold medal" and "outstanding green health food Award".

2015, Brussels international wine competition, the highest prize in the Moutai competition of 53 degrees

Source: Company data

Appendix 16: Moutai Processing Steps & Product Range

The Moutai spirit is made from a mix of locally produced red sorghum (a small grain rich in tannins), wheat and water. It is 100% organic without the addition of any artificial additives. From the selection of ingredients to the delivery of the finished product, the production cycle takes 5 years, passing through no less than 30 processes and 165 different procedures. The Moutai spirit is manually cultivated following the lunar calendar and the art of the production is passed on from generation to generation. Every production cycle takes 1 year. Like only brandy from the town of Cognac can be labeled Cognac, the same goes for Moutai, that can only be produced in the Moutai town. Any attempts to replicate this unique baijiu elsewhere, have failed. The environment and ancient methods have created an irreplaceable product



The brand of Moutai group has been reduced from the original 214 brands and 2389 products to 59 brands 406 products. Moutai Moutai series of wine brands and product barcodes have been reduced from 37 and 242 to 11 and 96, the reduction of 70% and 60% respectively. As for the brand reduction policy, Li Baofang, Secretary of the Party Committee and general manager of Moutai Group, pointed out on January 5 that the scale of the wine series should not be expanded through the increase of brand and variety, but should concentrate on large single products and focus on cultivating a billion-grade brand.

References

- Baker, M. R. and Ruback, R. (1999), Estimating industry multiples. *Working Paper, Harvard Business School*. 121(1), 155-170
- Boston. Benninga, S. Z. and Sarig, O. H. (1997), *Corporate Finance: A Valuation Approach*. McGraw-Hill, 1st edition.
- Benninga, S. Z. (2008), *Financial Modelling*. Massachusetts Institute of Technology, 3rd edition.
- Bhojraj, S., and Lee, C. M. C. (2002), Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms.
- Bloomberg Database.
- Institute Investment Series. New Jersey, John Wiley & Sons, Inc.
- Kweichow Moutai's Reports & Accounts from 2013 to 2017.
- Kweichow Moutai's Management Guidance 2017
- Liu, J., Nissim, D. and Thomas, J. (2002), Equity Valuation Using Multiples. *Journal of Accounting Research*, 40 (1), 135-172.
- Benninga, S. Z. (2008), *Financial Modelling*. Massachusetts Institute of Technology, 3rd edition.
- Damodaran, A. (1997), *Corporate Finance - Theory and practice*. John Wiley & Sons, 1st edition.
- Pinto, J. E.; Henry, E.; Robinson, T. R. and Stowe, J.D. (2010), *Equity Asset Valuation*. 2nd edition. CFA

Abbreviations

A	Actual
β	Beta
BS	Balance Sheet
BoM	Moutai Board of Management
CAGR	Compound Annual Growth Rate
CapEx	Capital Expenditure
CAPM	Capital Asset Pricing Model
CDS	Country Default Swap
CEO	Chief Executive Officer
CFA	Chartered Financial Analyst
CFF	Cash Flow from Financing Activities
CFI	Cash Flow from Investing
CFO	Cash Flow from Operations
CICC	China International Capital Corporation Limited
CIT	Corporate Income Tax
CNY	China Yuan
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 December 20xx
E	Equity
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before Interest, Tax, Depreciation and Amortization
EBT	Earnings before Tax
EPS	Earnings per Share
ERM	Excess Return Model ESG Environmental, Social and Governance
FCF	Free Cash Flow
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
FY	Fiscal Year

FYxxA	Financial Years Ended as at 31 December 20XX
FYxxF	Financial Years Forecasted for 31 December 20XX
g	Terminal Growth rate
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
ISEG	Lisbon School of Economics & Management
Kd	Cost of Debt
Ke	Cost of Equity
LT	Long Term
MRP	Market Risk Premium
NBV	Net Book Value
OTO	Online To Offline
P/B	Price to Book Value Ratio
P/E	Price to Earnings Ratio
PV	Present Value
QE	Quantitative Easing
PBOC	The People's Bank Of China...
Re	Cost of Equity
Rf	Risk Free Rate
Rd	Cost of Debt Re Cost of Equity
ROA	Return on Assets
ROE	Return on Equity
ST	Short Term
STD	Standard Deviation
SWOT	Strengths, Weaknesses, Opportunities and Threats
T	Corporate Income Tax Rate
TA	Total Assets
WACC	Weighted Average Cost of Capital
yQxx	yth Quarter Results of 20xx
YoY	Year on Year