DISCOUNTED CASH FLOW VALUATION OF CARABAO GROUP PUBLIC COMPANY LIMITED

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A THEMATIC PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MANAGEMENT
COLLEGE OF MANAGEMENT
MAHIDOL UNIVERSITY
2016

Thematic paper
entitled

DISCOUNTED CASH FLOW VALUATION OF CARABAO GROUP PUBLIC COMPANY LIMITED

was submitted to the College of Management, Mahidol University
for the degree of Master of Management
On
December 22, 2016

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ACKNOWLEDGEMENTS

The thematic paper has not been completed successfully if it did not have any supports from many persons and organizations.

I highly appreciated to Ajarn Vasan Siraprapasiri, Ajarn Piyapas Tharavanij and Ajarn Nareerat Taechapiroontong for being my advisors and providing comments that greatly improved.

I would like to thank to Chayapat Imthong as the main partner of the paper. I also thank to the supporter from Carabao Group Public Company Ltd. who provided many information that assisted this paper.

I would also like to show my gratitude to Thomson Reuters software, SETSMART web-base-application and SET Trade website for the source of analytical information.

Finally, I would like to thank my family for their understanding and encouragement as well as my friends in MMCF for the valuable time that we share together during academic years.

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ABSTRACT

The thematic paper is a production of studying valuation and applying in the practical stock. Carabao Group Public Company Limited is the stock that I chose for valuation as it was interesting and just went to IPO in 2014. A structure of the stock after getting into the market was completely changed since the company decided to repay all debts so almost capital structure was come from its shareholders' equity. Then, in 2016, the company planned to expand its production line and increase the proportion of international market so the company had highly potential to borrow to sustain its coming projects. Therefore, to forecast cash flows, it was challenge to project financial statements during changing the capital structure. The expected cash flow would be precise it depended on assumptions.

By using the Discount Cash Flow Valuation, it helps to find the intrinsic value of the company. The methodology under DCF method is emphasis on fundamental of a company (cash flows), cost of capital (WACC), investment plans, and additional factors.

As the result, the intrinsic value of CBG stock is 52.76 THB, which is undervalued when compare to the current price as of December 8, 2016 at 76.50 THB. I recommend to "Hold" as I still believe in the company and the effective strategies about sales channels abroad, management, and production that may reflect a good sight in the future.

KEY WORDS: CBG / The market / Sales / Growth / Energy drink

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ABBREVIATIONS

CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CBG	Carabao Group Public Company Limited
CLMV	Cambodia, Laos, Myanmar, and Vietnam
COGS	Cost of Goods Sold
D/E	Debt/Equity
EBIT	Earnings Before Interest and Taxes
EV	Enterprise value
FY	Fiscal Year
ICP	Inventory Conversion Period
L-T	Long-Term
mb	million Baht
NOPAT	Net Operating Profit after Taxes
NOWC	Net Operating Working Capital
PDP	Payables Deferral Period
RCP	Receivables Collection Period
Rf	Risk free
ROA	Return on Assets
ROE	Return on Equity
SG&A	Selling, General and Administration Expense
SET	Stock Exchange of Thailand
S-T	Short-Term
THB	Thai Baht
WACC	Weighted Average Cost of Capital

CHAPTER I
VALUATION

1.1. Highlight

Date: Dec 8, 2016 **Ticker:** SET: CBG

Price: THB 76.50

Recommendation: Sell

Price Target: THB 52.76

Table 1.1: CBG Financial Summary

FY Ended 31 Dec	2013	2014	2015	2016F	2017F	2018F
Sales Revenue (mb)	6,863	7,448	7,753	9,940	11,444	13,107
Gross Profit (mb)	2,070	2,510	2,860	3,630	4,143	5,163
Net Profit (mb)	626	1,012	1,256	1,609	1,741	2,363
EPS (Bt)	1.19	1.22	1.26	1.61	1.74	2.36
EBITDA (mb)	1,029	1,535	1,702	2,215	2,491	3,248
ROA (%)	13.2%	16.4%	17.4%	18.4%	16.4%	20.3%
ROE (%)	69.3%	28.2%	20.3%	24.2%	23.8%	29.0%

Figure 1.1: CBG Stock Pricing

• **Sell recommendation under production expansion and brand awareness campaigns:** The target price was THB 52.76 at the end of 2016, with downside of 31.03%. However, since CBG has rapidly invested much expansion and the uncertainty situation has been released both domestic and international markets such as the depreciated THB currency, political issues (e.g. Yemen and Afghanistan), and additional factors that would make people expect further sales volume. Moreover, UK has been the latest market that would make the firm's new opportunity to grow even more due to the UK market has been the fifth of the global energy drink consumption with the market value THB 1,200 billion.

• **CBG has potential to growth abroad:** Currently, CBG has exported its products to over 20 countries worldwide and the export sales now contributed 30% of total sales in FY15. CBG still foresaw great business opportunities in CLMV markets due to the proximity and lifestyle similarities. The population structure of these countries suggested that there were a large number of potential customers for CBG's product. Additional, CBG has launched new product "Carabao Carbonated" to Cambodia since Q2, 2015 and UK in 2016, thus we strongly believed that CBG revenue has still been highly rising up from both markets.

• **Consistent revenue growth and increasing in Thailand market share:** For the financial years ended 31 December 2012, 2013, and 2014, CBG had total revenue increasing 16.2%, 38.3%, and 8.5%, respectively. The consistent revenue and profitable growth were from the success of the vertically integrated business model, management's ability and capable personnel. Moreover, Carabao Dang had achieved continual market share growth commanding 15.9%, 17.5 %, 21.1%, and 21.5% in 2011, 2012, 2013, and 2014, respectively, of the energy drinks market.

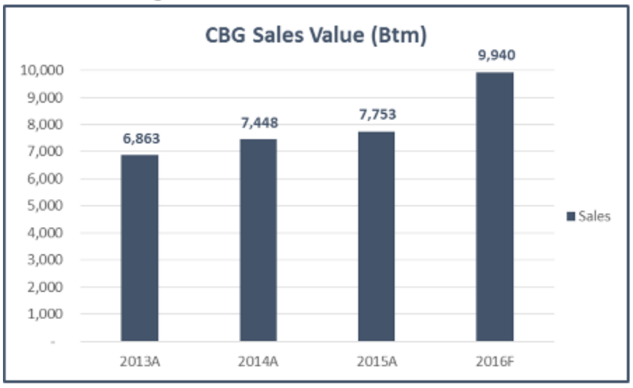


Figure 1.2: CBG revenues

• **Acceleration of net profit margin among its listed competitors:** CBG had higher net profit margin than average of the beverage industry and its listed peer during 2015, which was 16%. The net profit margin of CBG tended to be higher, when comparing to the net profit margin between 2014 and 2016 that is 14% to 16%. According to net income projection, the net profit margin tended to continually increase since 2016 onward. Nevertheless, average net profit margin of listed competitors (SAPPE, MALEE, and ICHI) was only 10% during 2015 and net profit margin was declined by 2% from 2014. It could be reflect that CBG had efficient management in its various expenses better than the listed peers.

1.2. Business Description

Carabao Group Public Company Limited (CBG) was established and incorporated on August 2001 in order to conduct its major business of manufacturing and distributing energy drinks under the name of "Carabao Dang" along with other beverages e.g. Start Plus. CBG was registered its conversion to a public limited company in 2014 and began trading in Stock Exchange of Thailand (SET) under the ticker "CBG", offering the sale of 250 million shares at the IPO price of 28 Bt.

The business vision of Carabao Group Public Company Limited (CBG) and its subsidiaries, which consist of:

Carabao Tawandang Co., Ltd. (CBD) is manufacturers, markets and sells energy drinks under the trademark "Carabao Dang" as well as other beverage like Start Plus.

Asia Pacific Glass Co., Ltd. (APG) manufactures and supplies glass bottles for the energy drink and electrolyte sport drink. The maximum capacity is around 650 million amber glasses per year (APG Furnace 1 plant) and will increase the capacity more in the future as it plans to build APG Furnace 2 plant in the end of 2016.

Tawandang DCM Co., Ltd. (DCM) manages the domestic distribution of the CBD's products into 2 channels; modern trade channel (24%) and traditional trade channel (agents and cash vans – 76%). DCM also has its own sales teams for promoting more than 500 salespersons around countryside.

1.2.1. Distribution Channels

Domestic Market: The Group sells its products domestically through two distribution channels, which are traditional trade and modern trade. Traditional Trade channel, CBG distributes through a network of agents who order products from CBG and delivery such products to sub-agents and retailing stores. Moreover, CBG has expanded a business unit of Distribution Centers (DC), which operates on a route-to market with cash vans that can assist in term of distribution coverage of CBG, especially on new-launched products, reaching to the market promptly. For Modern Trade channel, CBG directly distributes and contacts to modern trader such as convenience stores, supermarkets and hypermarkets.

International Market: CBG distributes its products internationally through trading partners which are importers, agents, or local distributors in each country to distribute the products to consumers in countries which are primary market.

1.2.2. Products or Services

In the present, CBG manufactures, markets, sells, and manages the distribution of two types of products, namely: (1) energy drink under the "Carabao Dang" trademark, and (2) electrolyte drinks under the "Start Plus" trademark. The type of products is separated into four sub-types as follows.

1.2.2.1. Bottled Carabao Dang: a non-carbonated energy drink. It contains 150 ml bottles at the general retail shops with price of Baht 10. The company mainly sells bottled Carabao Dang domestically.

1.2.2.2. Canned Carabao Dang: a non-carbonated energy drink. It contains 250 ml cans. The ingredients in canned Carabao sold in each country may differ slightly depending on the behavior and preference of the consumers as well as the applicable legal regulations in each country.

1.2.2.3. Canned Carabao Dang: a carbonated energy drink. It contains 325ml cans. The company has sold carbonated canned of Carabao to Cambodia since May 2015 and it has become very popular among consumers.

1.2.2.4. Start Plus: an electrolyte drinks. It contains 250 ml glass bottles at a general retail shops price in Thailand of 10 Baht.

1.2.3. Target Customer

The characteristics of target consumers for domestic market, CBG's consumers is the working population across all occupational groups who are in need of energy and refreshment during work and are mainly in the low to moderate income bracket. Separately with Start Plus product, target customer ranges from teenagers to middle-aged persons who look after themselves and need to rejuvenate for their work and outdoor activities, including compensating their perspiration loss from exercise. However, the target consumer of international market is different in each of the countries

1.2.4. Marketing Policies and Sales Promotions

Above-the-line marketing: CBG presents the Carabao Dang trademark along with the image of the presenter and brand ambassador, Mr. Yuenyong Opakul or Aed Carabao. Aed Carabao is the lead singer of Carabao band, whom is very popular among target consumers domestically.

Below-the-line marketing: CBG conducts marketing field activities through the Bao Dang Girl Teams which has strong familiarity, knowledge, expertise, and relationships with various levels of Agents, retail shops, and consumers in each area. The Bao Dang Girls Team has more than 500 members or more than 70 teams, covering most of the important marketing areas over Thailand.

International marketing: CBG selects agents who have expertise and experience in selling consumer goods in foreign countries as well as having the ability to distribute products nationally within those selected countries in order to sell the CBG's products.

1.3. Macro-Economic Analysis

1.3.1. Economy in Thailand

Thailand's economy is projected to expand higher by BOT calculation, especially in private consumption in the second quarter of 2016. This positive development helps compensate for the contraction in merchandise exports in trading partners' economies post-Brexit. For 2017, the economy is expected to grow at about the same rate as this year, driven mainly by private consumption and public spending, and also by expansion in tourism. Tourism is expected to return to normal after the adverse impacts of explosions in the southern provinces. Nonetheless, growth of merchandise exports remains limited and will continue to weigh on the economic recovery. Therefore, The Bank of Thailand decided to maintain the growth forecast for 2017 at 3.2%.

Table 1.2: GDP growth of Thailand

Percent	2015*	2016	2017
GDP growth	2.8	3.2	3.2
		(3.1)	(3.2)
Headline inflation	-0.9	0.3	2.0
		(0.6)	(2.2)
Core inflation	1.1	0.8	1.0
		(0.8)	(1.0)

Note : *Outturn
() June 2016 MPR
Source : Office of National Economic and Social Development Board, Ministry of Commerce, calculations by Bank of Thailand

1.3.2. Working-age population

Population aged 16 years and over is the worker aged from Sep 2015 to Sep 2016, there is the increase of labor force at the growth of 0.7%, or 400 thousand persons a year.

Table 1.3: Labor force status (September 2016)

of population Table 1 Comparison aged 15 years and over by labor force status

Unit : million persons

Labor force status	2015			2016	
	Aug	Sep	Oct	Aug	Sep
Persons 15 years and over	55.29	55.32	55.35	55.66	55.69
1. Total labor force	38.94	38.65	38.47	38.86	38.28
1.1 employed	38.49	38.32	38.09	38.46	37.87
1.2 unemployed	0.38	0.30	0.33	0.36	0.34
1.3 seasonally	0.07	0.03	0.05	0.04	0.07
2. Not in labor force	16.35	16.67	16.88	16.80	17.41

Source: National Statistical Office

1.3.3. Political & Government

Nowadays, the army and its allies have cemented control over Thai politics that a constitution just accepted in Aug 2016, which will ensure about political stability, as well as the parliamentary elections has been planned for 2017. After the draft constitution was approved in the referendum, the Thai economy will be expected to grow.

1.3.4. ASEAN economy

During the year, the South-East Asia or shortly called SEA market (Thailand, Indonesia, Philippine, and Malaysia) had significant growth, especially in Thailand, Indonesia, and Philippine. The cause of the growth was the result from spending in households and in the business, and also including the Government policies which was mainly support economy. The IMF and Asian Development Bank have expected that the SEA's economy tend to growth stable with the GDP around 4% to 6%. The factors that would support SEA in next two years are the domestic expenditures and the investment in infrastructure, as well as the unemployment rate has still lowed and the wages tend to increase in the future.

1.3.5. BREXIT

The UK referendum has left from the EU (Brexit) that would likely restrain growth in the euro area amid falling consumer and business confidence due to increased political uncertainties. As well as, it would also impact to growth of Thailand's trading partners to be tilted to the downside due to greater uncertainty post-Brexit. In particular, the trade and investment agreement negotiations between the UK and the EU would have significant implications for global trade and long-term global economic recovery.

Foreign direct investment in the UK may decline significantly as the UK is the financial center of the European Union (EU), and has highly dependent on capital from the EU. However, the impact on trade may not be apparent in the short run as a weaker Pound can make benefits from exports and tourism. This is because the EU has been a major export destination for the UK, accounting for 39 % of the UK's total exports or 8 % of GDP. Brexit can impact the EU's exports accounted for 2.4% of its

GDP. If the impact of Brexit on the EU make economy weakened, it also indirectly impacts to Asian countries, including Thailand, which has closer trade linkages with the EU. Nonetheless, the medium and longer-term impacts depend on the terms of negotiations between EU and UK, while the outcomes have implications on the unity of the EU in the future.

1.4. Industry Analysis

1.4.1. The purchasing power in Thailand was declined

According to Nielsen's evaluation, the energy drinks market in Thailand grew at a CAGR of 2.6% between 2012 and 2015. Moreover, major consumers of energy drinks in Thailand has distinct characteristics which are mainly in the lower to middle income population aged 26 to 45 years old. They prefer energy drinks which are non-carbonated and sweeter than energy drinks consumed in other countries. Furthermore, considering on Thai consumption behavior, Thais prefer consuming bottled energy drinks than canned energy drinks. Therefore, it is the company's opportunities to get benefits from these unique characteristics of Thai consumers and, in the other hand, it also makes more difficult for international companies to compete in Thailand.

However, refer to Thailand's economic slowed down during the last year as well as natural disaster which affected to agricultural products, it was directly affected to low – moderate income people who is the major customers of energy drink market. Therefore, the energy drink market in 2015 was grown only 1% per annum. The energy drink market could be separated into 15% for premium energy drink market which was grown 2.6% and 85% for mass energy drink market which was not grown from previous year.

1.4.2. CLMV group country (Cambodia, Laos, Myanmar, and Vietnam)

It still has potential and significant growth of energy drink market due to the similarity of population structure as Thailand, especially Myanmar and Vietnam. The population structure of CLMV countries is the significant major customers in order to encourage growth of energy drink market of Thailand in accordance with GDP, CAGR between 2014 and 2018 among CLMV countries are 7.3% to 9.6%.

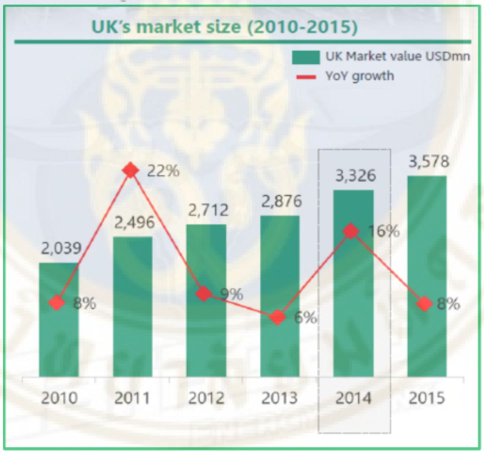
Table 1.4: GDP per capita of CLMV

Countries	GDP CAGR'14-18	GDP per capita	Population(mn)
Myanmar	10%	7.5%	53.80
Vietnam	7%	6.2%	91.70
Cambodia	9%	8.2%	15.50

Source: IMF World Economic Outlook, and World Bank

1.4.3. United Kingdom energy drinks industry

It would be the new significant marketplace of Carabao group. The market size of UK energy drink market value was 3,578 million USD and compounded with annual growth rate during 2010 to 2015 was 12% per annum.



Source: Company data

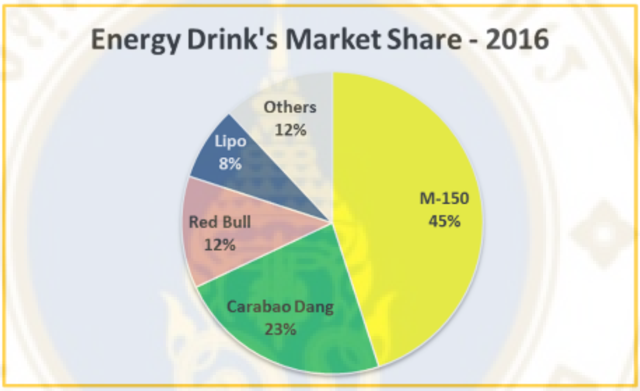
Figure 1.3: UK Market Size

1.5. Competition Analysis

Due to the energy drink industry, Carabao group has competed with two types of business which is direct competitors and other beverage businesses (Indirect competitors). Carabao group has operated Carabao Dang energy drink since 2002. “Carabao Dang” trademark has been well known among the consumer in Thailand as it associated with the Carabao songs-for-life band, thus it helped the product in term of good image and reputation.

1.5.1. Direct competitor within energy drink market in Thailand

Currently, there are four major players in Thailand's energy drink market; first, M150 brand which is brand of Osotspa has got approximately 45% of Thailand's energy drink market share. Carabao Dang is the second which got approximately 23%. Then, Red bull energy drink brand has market share following Carabao Dang, by got market share approximately 12%. Lastly, Lopovitan-D brand which also be brand of Osotspa gets approximately 8%.



Source: Company data

Figure 1.4: Thailand's Energy Drink Market Share

As Carabao group aims to become leading energy drink manufacture in Thailand by using efficiency of cost reduction, aggressive marketing and advertising, and increasing of distribution coverage. At present, all energy drink bands have been sold at a retail price of 10 Baht per bottle. Therefore, in order to increase their market shares, each market players, including CBG, need to conduct aggressive marketing activities. The consequent strategies of the company are marketing activities and aggressive advertising so the market share of CBG has continuously increased from 15.9% to 21.3% during 2011 to 2014, and the market share of CBG has also increased to 21.7% at the end of 2015, even the energy drink market in year 2015 was grown only 1% per annum.

Differentiate of the product, CBG created a unique selling point and differentiated its energy drink by adding vitamin B12, which is vital for proper functioning of brain and nervous system. In addition CBG used the innovative marketing by advertising of vitamin B12 in their energy drink in order to encourage consumers to try and repeatedly buy their products. However, M150 energy drink brand has also changed their advertising to be emphasized on benefit of vitamin B6 and B12 on its products, after the successful increasing the market share of CBG from using of advertising media, especially vitamin B12.

1.5.2. Indirect competitor among beverage industry

CBG could compare among other indirect competitors in the beverage industry, these companies are the closest listed peer among the beverage industry; SAPPE, ICHI, and MALEE.

SAPPE Plc. (SAPPE) has produced functional beverage and juice drink as the main products, currently, SAPPE has both domestic (40%) and oversea (60%) distribution channel. At the end of 2015, SAPPE has CAGR of revenue 4.4% and CAGR of net income approximately 29% during 2013 to 2015, due to more expansion of export distribution. The forward strategies of SAPPE also emphasized on launching new products type to both domestic and overseas distribution channel.

Figure 1.5: SAPPE's Products

Ichitan Group Pcl (ICHI) has sold ready-to-drink green tea and functional drinks as the main products. Ichitan is the second of RTD tea market share in Thailand. ICHI has declining of revenue growth 4% from 2013 to 2014 and reversely increased 2.6% from 2014 to 2015.

Figure 1.6: ICHI's Products

Malee Sampran (MALEE) is a leading canned fruit, fruit juice & beverages manufacturer and distributor in Thailand. Malee is the second rank in the Premium Juice UHT market share following Tipco brand. In 2015, sales revenues increased to 5,428 mb or +13.8% YoY. An increasing of sales revenues were primarily from CMG business and export revenues. The main strategies of growth distribution has emphasized on export sales, which is similar to CBG strategy.

Figure 1.7: MALEE's Products

1.6. Investment Summary

Growth stock has been pushed by aggressive expansion of distribution.

1.6.1. Cash Van Distribution Coverage to over Thailand Region

CBG has launched the cash van teams and established distribution center which aimed to coverage over Thailand region by establishment of 30 distribution centers with 337 cash vans in end of 2016. Thus, the full establishment of distribution centers and cash vans could rise up more domestic revenues.

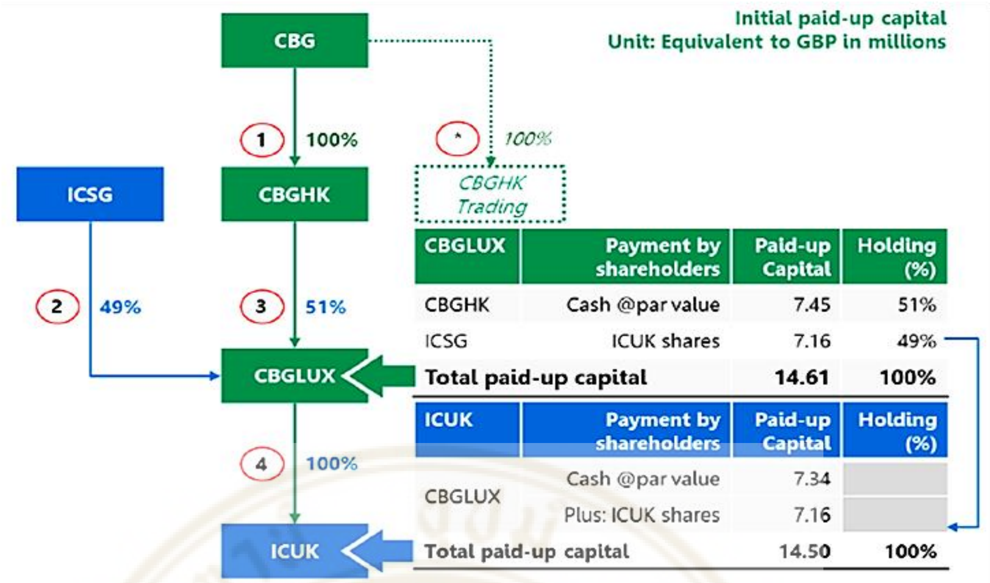
1.6.2. CLMV still offers strong growth prospects

Currently, CBG exports its products to over 20 countries worldwide and export sales now contribute 30% of total sales in FY15. CBG still foresees great business opportunities in CLMV markets due to the proximity and lifestyle similarities. The population structures of these countries could forecast a large potential customer base for CBG as well as CBG has recently launched new product "Carabao Carbonated" to Cambodia since Q2, 2015. Thus, CBG has potential to raise its revenues from CLMV market for the next several years.

1.6.3. Investment in foreign subsidiary

The company focused on foreign subsidiary investment and brand awareness in Europe and UK.

Referring to investment in foreign subsidiaries, the overseas investment project was a result of a joint venture with Intercarabao Private Limited ("ICSG"), a non-related company with the company and subsidiaries, in order to investing and holding shares in Intercarabao Limited ("ICUK"). The initial investment was equivalent to GBP 7.50 million or approximately THB 341.10 million through indirect shareholding of 2 newly established subsidiaries namely Carabao Holdings (Hong Kong) Limited ("CBGHK") and Carabao Venture Holdings (Luxembourg) S.a.r.l ("CBGLUX"). Therefore, CBG would control over CBGLUX via its indirect holding of 51 percent through CBGHK. However, CBG has not classified the indirect investment in ICUK as investment in subsidiary company because it has no power to control such company. This investment would present as other long-term investment in the consolidated statements of financial position. Furthermore, from management expectation, ICUK operation would be recognize lost from the acquisition year for few years and ICUK entity would be expected to break-even at end of 2018, by assume that ICUK would gain 1% of UK's energy drink market share.



Source: Company Information

Figure 1.8: ICUK's Structure

In term of brand awareness, CBG used sport marketing by becoming principal partner with Chelsea and Reading football club and also made agreement to encourage football league cup in UK.

1.6.4. Continued benefit from BOI privilege

CBG received the BOI privilege of income tax exemption from 2015 to 2017 (3 years) because of the establishment of first amber glass production plant and commenced production in Aug, 2014. The applied income taxes rate was declined from 20% in 2013 to 14% in 2015.

CBG will continuously receive the applied income taxes rate 14% from 2016 to 2020 as the new amber glass production plant will be finished construction and start to production in Q4 2017, consequently, CBG is still able to enjoy BOI tax privilege for next 3 years.

1.6.5. Consistent revenue growth and rising up the market share

From December 31, 2012, 2013 and 2014, the company had total revenue increasing 16.2%, 38.3% and 8.5%, respectively. The consistent revenue and profit growth was come from the success of the vertically integrated business model, management's ability, and capable personnel. Moreover, the company had achieved continual market share growth commanding 15.9%, 17.5 %, 21.1% and 21.5% in 2011, 2012, 2013 and 2014, respectively, of the energy drinks market.

1.6.6. Acceleration of net profit margin among its listed competitors

CBG had higher net profit margin than average beverage industry and its listed peer during 2015, which is 16%. The net profit margin of CBG seemed to be higher, when comparing the net profit margin 14% in 2014and 16% in 2015, and be projected to increase since 2016 onward.

Nevertheless, average net profit margin of listed competitor (SAPPE, MALEE, and ICHI) was only 10% during 2015 and net profit margin was declined by 2% in 2014. It reflected that CBG had efficiently managed its various expenses better than it listed peers.

1.6.7. Potential Loan from Financial Institution and Interest Expense

The investment plan in foreign subsidiaries and significant property, plant and equipment during 2016 was approximately 3,300 mb, including investment in ICUK. However, the cash and cash equivalent as of 31 Dec 2015 was only 1,370 million Baht. In order to increase the source of funds, management has plan to loan from financial institution approximately 2,000 mb in 2016. The interest rate of this loan will depend on management plan. Therefore, the interest rate could be assumed from the previous financial institutional loan (MLR rate, 6.25%, minus with 1.5% per annum).

1.7. Valuation

1.7.1. Discount Cash Flow Analysis: Free cash flow to Firm (FCFF)

Regarding CBG valuation, I used FCFF rather than FCFE method due to the capital structure has been changed. In 2016, the firm projected to use a huge capital to expand its production i.e. APG plant phase II and filling canned production plant. Since CBG did IPO in 2014 and used this amount of capital for all existing loan repayment so it meant that the company could fund the other new capital by using debt. Therefore, using FCFF method properly reflects the free cash flow of the company.

1.7.2.1. Five-Year-Projected Cash Flow and Assumption

Key revenue drivers

- Ability to increase distribution coverage in Thailand's energy drink market
- Expansion to overseas both new and existing markets (CBG has focused on CLMV countries over the past 2-3 year).
- Launching new products to attract attention and boost its sales
- Investment in foreign subsidiaries in order to make strong overseas distribution channels

Key margin drivers

- Lower costs and higher volume due to economies of scale and new machinery, it makes a lower manufacturing cost per unit.
- Lower cost due to commencement and full utilization of APG glass bottle manufacturing facility.

Sales projection with aggressive growth rate

The domestic sales have been largely grown in 2016 when compared with projected domestic sales growth rate between 2017 and 2020. The calculation of domestic sales growth was based on sales amount from cash van in Q2, 2015, which had established 9 distribution centers and CBG also had aggressive strategy to reach 30 distribution centers with 337 cash vans in end of 2016 which aimed to coverage over Thailand region. Therefore, I projected domestic sales growth in 2016, 17%.

At the end of 2016, CBG has launched the new products types as it planned to break new production lines which it could compensate the revenue growth of existing product that has been saturated. Therefore, the projection of domestic sales growth was approximately 6% and 4% in 2017 and 2020.

Overseas sales growth rate would be aggressive around 56% in 2016. There were several important factors lead be the aggressive growth. First, in CLMV countries, the overall compound annual growth rate (CAGR) was 38% during 2013 to 2015, so I repeatedly use 38% of sales growth rate among CLMV countries, except Cambodia. I proposed 54% as specific sales growth as the CAGR during 2013 to 2015 of sales in Cambodia was 62% as the result of launching new product "Carabao Carbonated Can" in Q2, 2015. Moreover, the potential recovery in sales of Afghanistan which have been declined comparing to the corresponding period last year due to political issues.

Overseas sales growth rate would maintain 31% and 26% in 2017 and 2018, respectively. I still repeated to use the growth of sales rate among CLMV countries. Furthermore, the additional growth rate in 2017 would focus on sales of United Kingdom region since CBG started to launch and expand new product "Carabao Carbonated UK" in United Kingdom in Q4, 2016. In addition, CBG also invested in ICUK subsidiary in order to get more competitive advantage about distribution expansion in UK.

The company management has expected sales in UK, in 2016, approximately 250 mb or 2% of total sales, which was calculated from sales quantity of 30 million units over the market (1% of the UK market share) and the average sales price (per unit) would be 8.32 Baht. Moreover, regard UK's energy drink growth recently was 12% per annum. Therefore, I expected sales growth in UK after 2017 to be 12% per annum relying on the market growth.

Cost of Goods Sold is affected from amber glass production plant

The cost of goods sold margin was calculated from gross profit of each domestic and overseas sales multiply by sales proportion of domestic and overseas. After getting gross profit margin then subtracted with 1 to get overall cost of goods sold of each year projection.

According to historical gross profit margin, Gross Profit Margin of domestic sales was increased from 33% to 38%, or 15% increasing approximately. It meant the historical cost of goods sold would decrease from 67% to 62% as it caused from the first amber glass production plant commenced production in August, 2014, which amber glass bottles has been one of main raw material cost in the production line.

By doing this, the expected of the domestic gross profit margins from 2017 to 2018 were 39% and 45%, or in the meaning of the cost of goods sold, the company had 61% and 55% in 2017 and 2018. These were calculated from historical data when the company opened the first amber glass production plant, the cost decreased around 15%. Therefore, when the company projected to build the other amber glass production plant which would start production in Q4 2017, the overall cost of goods sold margin was assumed to decrease in the same amount to 61% in 2018 onward.

Selling, Administrative, and Depreciation Expense Projection

Selling and administrative expenses would be projected proportion with sales as around 14% and 2%, respectively from 2016 to 2020. The selling and administrative expense assumption was calculated from average percentage of S&A expenses comparing to sales during 2013 to 2015.

However, depreciation and amortization expenses had separately projected from selling and administrative expenses. Depreciation and amortization expense was projected as 5% by using depreciation rate multiplied by the average of beginning and ending of fixed and intangible assets among 2016 to 2020.

Net Working Capital Projection

The projection of Trade and other receivables, Inventories, and Trade and other payables were calculated by using average RCP (15 days), ICP (20 days), and PDP (65 days) from 2013 to 2015 and it would forecast as follows.

- **Trade and other receivables** were calculated as sales projection each year divided by 365 and then multiplied by average of RCP (15 days).
- **Inventories** were calculated as cost of goods sold of each year divided by 365 and then multiplied by average of ICP (20 days).
- **Trade and other payables** were calculated as change in inventories add with cost of goods sold of each year, then divided by 365 and multiplied by average PDP (65 days).

1.7.2.2. Huge investment project in CAPEX: Management of CBG has already determined the strategic investment plan in fixed assets between 2016 and 2017 as follows.

Amber Glass Production Plant

Amber Glass Production Plant could make an increase of production capacity for amber glass bottle. Investment budget around 1,243mb which construction would start on Q3 2016 and the amber glass production plant would finish construction and start production in Q4 2017. Thus, we proposed to separate increasing of fixed assets in to two periods equally, 2016 and 2017.

Filling production capacity

New plant for filling production capacity could increase cans-filling production capacity. Investment budget would be around 1,377 mb and start the construction in Q3 2016, and expect to finish during Q1 2017. Thus, the fixed assets addition would increase in 2016 for whole amount.

Land and production machinery

CBG also purchased more lands and production machineries about 352 mb during 2016. The assumption was projected by using the average of fixed and intangible assets from 2013 to 2017 that is 1.6 times to forecast between 2018 and 2020.

1.7.2.3. Weight Average Cost of Capital (WACC) separated into two parts; cost of debt after tax and cost of equity. Cost of equity was calculated by CAPM method, using the 10-year-government-bond of 2.74% as the risk free rate. The risk premium was 8.75% from Damodaran and adjusted with a beta of 0.79 to get cost of equity at 9.6%. On the other hand, the cost of debt I used the interest rate of long-term loan deducting with percentage of 2 (MLR: 4.75% - 2.00%) post-tax of 14%. Then, the cost of debt was 4.07%. Therefore, the proportion between debt and shareholders' equity to weigh the rates between cost of debt and cost of equity was 2.5 and 97.5. As the result, WACC would get in the percentage of 9.6.

1.7.2.4. Terminal Value Assumption: It is the largest cash flow that usually represents the value in long-term. In this case, the company could not stay in the fixed and high growth as same as projection so to be more real, the two-stage discount cash flow was used in the valuation. Therefore, I made assumption to find a constant-growth rate.

According to International Monetary Fund – IMF, I used the growth rate of GDP combined with the population rate growth of each country. To find the domestic constant growth, there is the population growth of 0.2% and the GDP growth (2016F-2020F) of 3.08%. As well as in international, I used the main countries that had top sales revenues; Cambodia, Afghanistan, Yemen, Myanmar, Vietnam, and UK, which had the rate of population of 1.5%, 2.3%, 2.3%, 0.9%, 1%, and 0.6%, respectively. The GDP growths of these were 6.91%, 3.43%, 4.79%, 7.84%, 6.22%, and 2.11%, respectively. I also forecasted the weight of each growth by using the number of sales at the end of 2020F. The proportion of domestic and international countries in 2020F would be 49.08% and 49.94%. Then, both growths were weighed to the sales proportion and got the constant growth of 3.48%.

The terminal value was calculated by using three components; the cash flow from last period of growth, the constant growth, and the WACC. For WACC, it was the same rate to both high growth and constant growth period. As the result, CBG's terminal value was 66,755 mb or THB 66.75 per share and when it was discounted back to 2016 (the present value), it would get an amount of 46,496 mb or THB46.50 per share.

In conclusion, CBG's 4-year projected discounted cash flow (2017 – 2020) was 6,835 mb or THB 6.8 per share. The discounted terminal value was 46,496 mb or THB46.5 per share. The total of debt is 2,000 mb or THB2 per share.

So that, CBG stock price would have the current appropriate price (target price) around THB52.76 per share, so I recommended "Hold".

1.8. Financial Statement Analysis

1.8.1. Summary figures from financial statements (Size Analysis)

- **Income Statement**

According to CBG's strategy, it has expanded distribution to international market, overall CBG's revenue gradual increased 4.1% at the end of 2015 comparing to 2014 (YoY). The revenue mainly came from domestic (70%) and international (30%). The sales from international distribution rose 8.9% YoY because of the new product "Carabao Carbonated" promoting in Cambodia during Q2, 2015. The Cost of Goods Sold was 4,893 mb or 63% of the total sales, which decreased from the previous year. Since there was the amber bottle glass manufacturing, which it just operated in late of 2014, so it could reduce the huge cost from dependency on third-party sourcing. Moreover, the Gross profit was 2,860 mb baht, rising 14% YoY. The Selling and Administrative Expense also increased 13% YoY, as aggressive marketing and advertising of CGB in order to gain more the market share in energy market. Finally, profit of the year was 1,256 mb, which increased by 24% YoY.

- **Balance Sheet**

Total current assets were risen approximately 20% YoY, as at end of 2015, due to 1,377 mb in cash and cash equivalent. The Trade and other receivable increased by 38% YoY, however Inventories was decreased 22% YoY. The significant proportion of 64% of the total asset was Property, plant and equipment, 4,683 mb as of 2015. There was not any debt outstanding in 2015, because of the repayment during 2014. Consequently, total shareholders' equity has been 86% proportional with total liabilities and shareholders' equity.

1.8.2. Common Size Analysis

- **Income Statement**

The table showed the Common-size of income statement as of 2014 and 2015, by using sales as the percentage base 100%. The cost was around 62% to 65% of the sales, which was one of the main costs, so the gross profit was around 35% to 38%. For the selling, general and administration was approximately 18% of sales as it has done a lot of expansion and distribution to different markets, so the Earnings before interest expenses and taxes was around 19%. Since it had IPO in late of 2014 that made the company had ability to repay its loans so there was no financial cost in 2015. Therefore, the net profit was at 16% of sales in 2015.

Additionally, in 2015, the Common-size of income statement between Carabao Group and the peer companies (the average of SAPPE, ICHI, and MALEE). It showed that the percentage was quite similar as the proportion of Cost of Goods Sold, SG&A, Earning before interest and tax (EBIT), and Net income of CBG were 62%, 19%, 19%,19% and 16%, respectively when compared to the industry (peer companies) that was 64%, 24%, 12%, and 10%, respectively.

It concluded that firm had low percentage in COGS and in the SG&A so the Net income of CBG was higher than peer at 16%. The company had the cost as same as an amount of the industry in 2014, then, in 2015 the company could reduce its cost by 2% because of the production line's reduction in the amber glass bottle, as well as the Selling, general and administration that CBG was still underlying when compare to the peer. This showed that the company still had a gap of these expenses to invest in term of marketing and administration, especially in term of wage and salary to expand more manufacturing. Since CBG has already paid its loans which made the company having less expense and getting benefit of tax reduction. Therefore, when it compared in term of Net profit, the company got the higher percentage than the industry.

Table 1.5: CBG's Common-Size of Income Statement in 2014 and 2015

Income Statement	2014 **(31/12/2014)**	2015 **(31/12/2015)**
Sales	100%	100%
COGS	65%	62%
SG&A	17%	19%
Other Expenses	0%	0%
EBIT	18%	19%
Finance Cost	1%	0%
Income Tax Expense	3%	3%
Net Profit	13%	16%

Source: the company annual report

Table 1.6: CBG's Common-Size of Income Statement and peer comparisons in 2014

Income Statement	2014 (31/12/2014)				
	CBG	SAPPE	ICHI	MALEE	Industry
Sales	100%	100%	100%	100%	100%
COGS	65%	60%	65%	66%	64%
SG&A	17%	24%	17%	26%	22%
OTHER EXPENSES	0%	0%	0%	0%	0%
EBIT	18%	17%	18%	9%	14%
FINANCE COSTS	1%	0%	2%	1%	1%
INCOME TAX EXPENSES	3%	3%	-1%	2%	1%
NET PROFIT (LOSS)	13%	13%	17%	6%	12%

Source: SETSMART

Table 1.7: CBG's Common-Size of Income Statement and peer comparisons in 2015

Income Statement	2015 (31/12/2015)				
	CBG	SAPPE	ICHI	MALEE	Industry
Sales	100%	100%	100%	100%	100%
COGS	62%	58%	66%	66%	64%
SG&A	19%	27%	18%	26%	24%
OTHER EXPENSES	0%	1%	1%	0%	1%
EBIT	19%	14%	15%	8%	12%
FINANCE COSTS	0%	0%	1%	1%	1%
INCOME TAX EXPENSES	3%	3%	1%	1%	2%
NET PROFIT	**16%**	**11%**	**13%**	**6%**	**10%**

Source: SETSMART

- **Balance Sheet**

For the Statement of Financial Position, there were three-year historical and each year the proportion had changed differently as the follows.

Assets separated into two parts that was the current assets and non-current assets. In the current assets, it amounted around 25% to 35% and the largest part was the cash and cash equivalents. In 2015, it had a high amount up to 19% of the assets due to the gain from IPO. On the other hand, the non-current assets had percentage around 65% to 75% and the latest year had the lowest amount as there were a tremendous increase of cash and cash equivalents.

The main proportion of Liabilities and Shareholders' Equity was come from the equity part 86% and the liabilities part 14%, this was the new structure after 2013 since the company raised the shares to the public.

The common-size of financial position statement of CBG and the peer companies in 2015 showed that majority of CBG has come from equity by 84% and, the industry side, it was just 61%. CBG had a small amount of the current assets at

13% compare to the industry that was 30%. The reason is because of the IPO and loan repayment so the capital structure had changed to equity per debt; 86:14 whereas the industry was 61:39.

Table 1.8: CBG's Common-Size of Statement of Financial Position and peer comparisons

Items	2013	2014	2015
	31/12/2013	31/12/2014	31/12/2015
Cash and cash equivalents	9%	7%	19%
S-T investment	0%	13%	6%
Short-term loans to related parties	6%	0%	0%
Trade account and other receivables	5%	4%	6%
Inventory	4%	5%	3%
Other current assets	1%	1%	0%
Total Current Asset	**25%**	**30%**	**35%**
PP&E	72%	68%	64%
Investment Properties	3%	2%	1%
Other non-current assets	1%	1%	0%
Total Non-current Assets	75%	70%	65%
Total assets	**100%**	**100%**	**100%**
Trade accounts and other payables	18%	11%	11%
Short - term loan	17%	0%	0%
Other current liabilities	3%	2%	2%
Total current liabilities	38%	14%	13%
Long - term loan	39%	0%	0%
Other noncurrent liabilities	1%	1%	1%
Total Non-current Liabilities	**40%**	**1%**	**1%**
Total Liabilities	**78%**	**15%**	**14%**
Share capital issued and fully paid up	12%	14%	14%
Premium on share capital	0%	56%	54%
Retained Earning	0%	9%	13%
Other component of equity	10%	6%	6%
Equity attributable to Equity holders parent	22%	85%	86%
Total shareholders' equity	**22%**	**85%**	**86%**
Total liabilities and shareholders' equity	**100%**	**100%**	**100%**

Source: the company annual report

1.8.3. Trend Analysis

- **Income Statement**

Over three years historical, CBG had CAGR growth of 6% which got along with an increase of energy drink growth 1%. However, it was still not good enough when compared to the average of past-three-year-growth that was around 8%. Since the politic situation that affected the market become slow down so many companies had to work hard to pass though that period. On the other hand, if it compared to the peer companies such as ICHI (+1%), SAPPE (+3%), and MALEE (-3%), CBG had the highest growth.

The CBG's Cost of goods sold was increasing in relation to an increase of sales which had the CAGR at rate of 1%. To compare with the CAGR sales growth at 6% the cost seemed to be efficiency since the company could manage its cost by producing its own materials rather than outsourcing. However, when it was compared to the peer companies, which was ICHI (+2%), ICHI (-3%) and MALEE (-6%), it seemed that some peer companies has done well in order to manage their costs.

The Selling, General and Administration was also one of the important costs, excluding operation cost. CBG got the CAGR growth 12% from promoting its product to the market and also about wages for additional employees to support the company's future expansion.

For the Net income, CBG has CAGR growth at 42%, and ICHI, SAPPE, and MALEE also had the CAGR growth at -13%, +43%, and +4%, respectively.

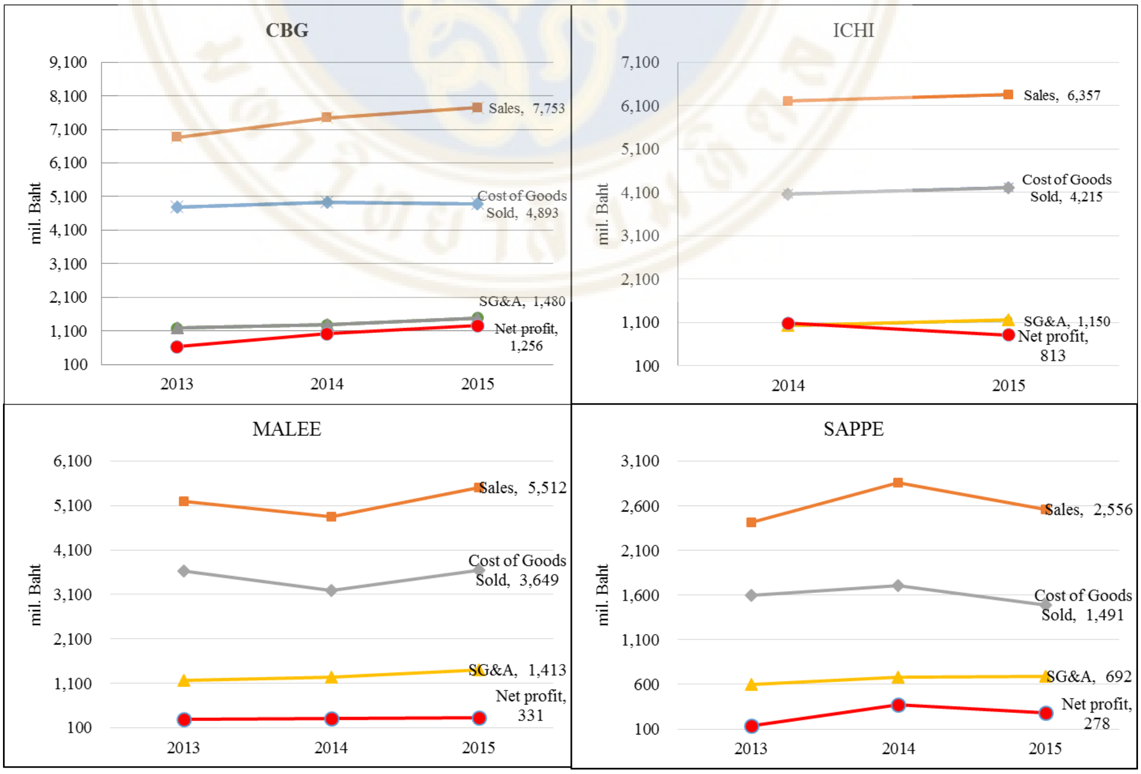


Figure 1.9: Income Statement: Sales, Cost of Goods Sold, and SG&A

- **Balance Sheet**

The trend shows movement of the main transactions in current asset; Cash and Cash equivalents, Account receivables, and Inventories. From the graph below, it seems that each company has different proportion. CBG has CAGR growth of cash and cash equivalents, account receivables, and inventories; 68%, 30%, and 10%, whereas the peer companies like ICHI has the growth at 15%, 13%, and 41%, MALEE has the growth at 5%, 11%, and 1%, and SAPPE has the growth at -3%, 2%, and -3%, respectively.

For Non-current assets, the majority is the Property, plant and equipment. CBG has CAGR growth at 11% whereas ICHI, MALEE, and SAPPE have the growth at 16%, -0.4%, and 35%, respectively. However, the trend seems stability as it is the long-term assets and the assets that the companies have invested for its production.

On the other hand, the Liabilities and Shareholders' equity, each company had different capital structure. For CBG, it did not have short-term and long term loan but it relied much on the equity capital, as well as SAPPE referred to use Equity rather than Liabilities side. However, it was opposite to ICHI and MALEE that has partly used liabilities, especially MALEE that had high growth rate of short-term loan up to 17% increasing.

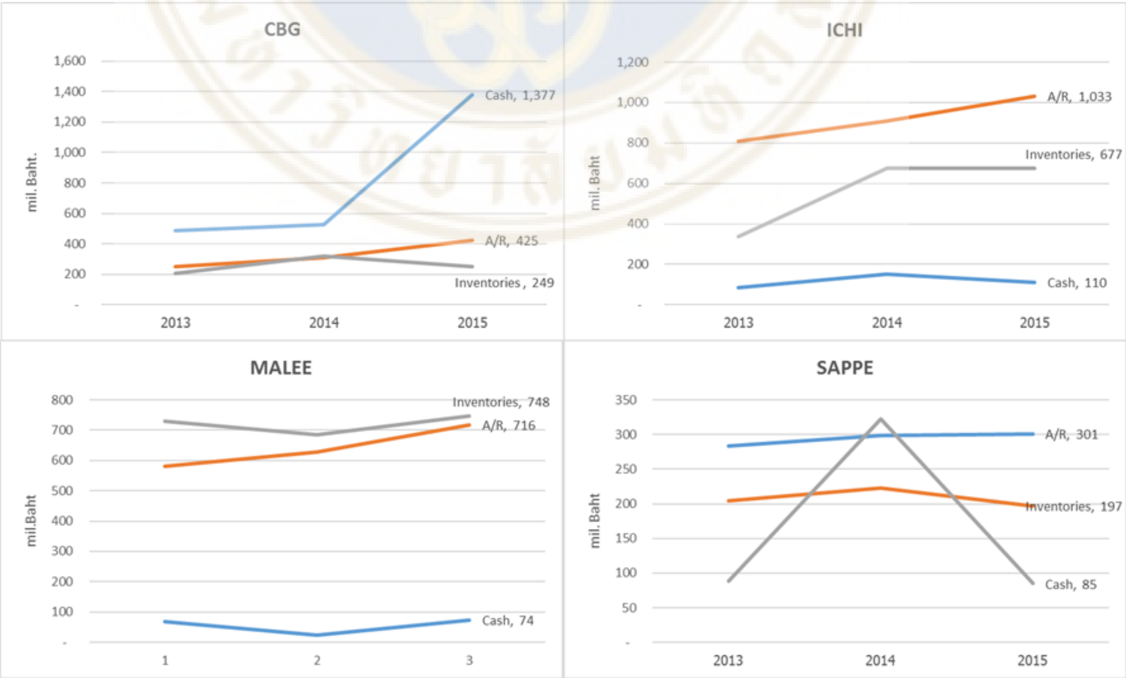


Figure 1.10: Trend Analysis: Cash, Account Receivables, and Inventories

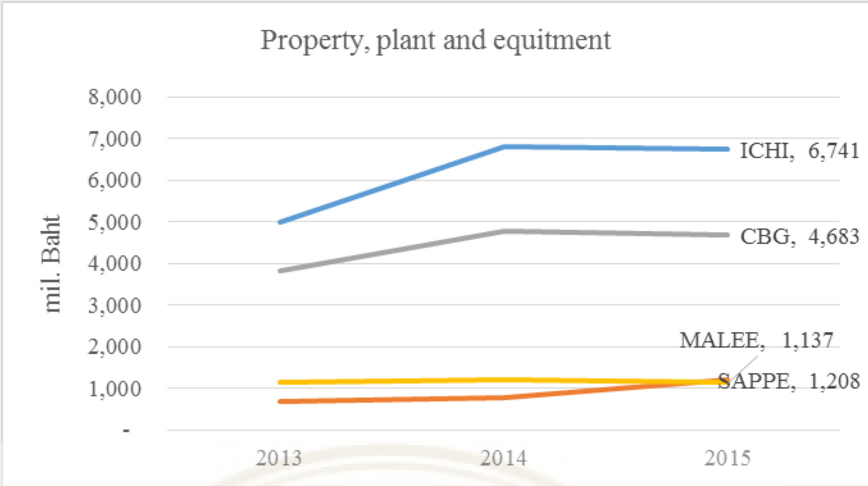


Figure 1.11: Trend Analysis: Property, Plant and Equipment

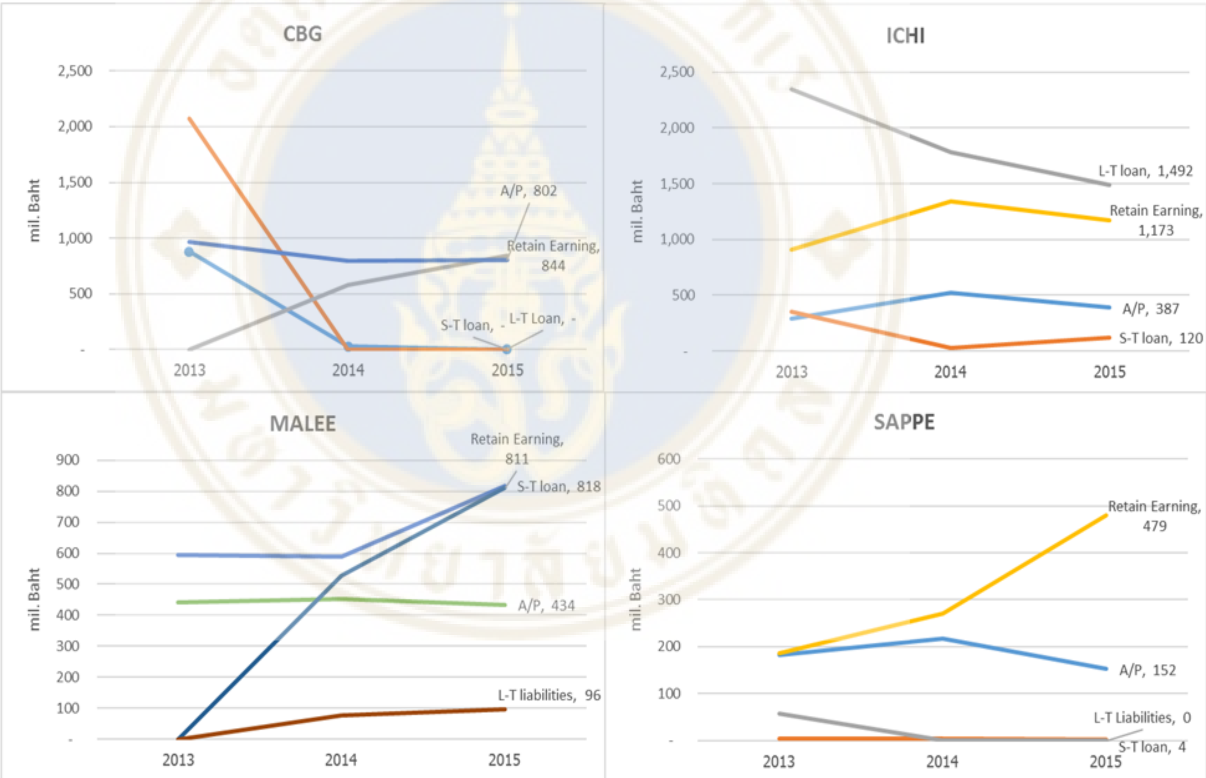


Figure 1.12: Trend Analysis: Account Payables, Short-term loan, Long-term loan, and Retain earning

1.8.4. Financial Ratio: Return

Return on Assets (ROA): The average return on assets of CBG from 2013 to 2015, which has not been changed significantly in the period of time, was approximately 16%. Return on Assets from 2013 to 2015 continuously increased from 13% to 17%, respectively. Average profit margin was 13% (2013 – 2015), the profit margin increased similarly with pattern of return on assets in the same period. Assets turnover ratio also decreased continuously from 1.45 to 1.07 times.

Comparing to average ROA from listed industry peer (SAPPE, MALEE, and ICHI represented of beverage industry) was 14% in 2015, which lower than ROA of CBG, 17%, in 2015.

Return on Equity (ROE): Return on Equity of CBG dropped dramatically from 69% to 28% in 2014 and decreased slightly to 20%, in 2015, as well as the capital structure leverage was dropped from 5.25 to 1.72 in 2014 and still decreased to 1.17, in 2015. Even though, the Net income of CBG continuously increased during the period. In 2014, CBG issued new shares for capital funding by using initial public offering of 150 million shares. As the result, total shareholders' equity increased 4,880 mb from 2014 to 2015, which affected to significant drop of return on equity of CBG.

Comparing to ROE of CBG to average ROE from listed industry peer, average ROE from listed industry peer was 20% in 2015, which decreased by 11% from 2014. It could conclude that the trend of CBG and the industry had similar ROE.

1.8.5. Financial Ratio: Risk

Liquidity Risk: The current ratio was represented the liquidity risk, for CBG, it crucially increased from 0.65 to 2.18 and continuously increased to 2.67, due to higher current investment and cash and cash equivalent at the end of 2014. In 2015, total current assets were 2,542 mb which had current investment and cash and cash equivalent 73% of the current assets, while total current liabilities were 951 mb. Furthermore, cash conversion cycle could obviously indicate liquidity risk, the average cash conversion cycle from 2013 to 2015 that was negative 31 days, and increased to negative 22 days in 2015.

Solvency Risk: At end of 2015, Debt ratio and Debt to Equity ratio was nil, because the company repaid all financial institution loans, including short-term loan during 2014. However, management has planned to make loan from financial institution approximately 2,000 mb in 2016 for its expansion.

1.9 Investment Risks and Downside Possibilities

1.9.1. Change in government's policies, rules, and regulations

The business of producing, marketing and selling "Carabao Dang" of CBG is governed by certain statutes and regulations of concerned agencies. The restrictions and requirement are significant factors which CBG must take into account when making decisions relating to its marketing and sales promotion activities. Therefore, if the government authorities change the policies, rules or regulations relating to energy drink business to be more stringent, there could be an impact on the marketing activities and strategies of CBG.

1.9.2. Volatility of raw material prices and shortage of raw materials

The main materials used in manufacturing CBG's products are glass bottles (approximately 90% are supplied by APG) and sugar. As for APG, the raw materials are glass cullet and natural gas.

- **Sugar** is a commodity product with price volatility depending on the market demand and supply and the government policies. If there is any increase of the price of such raw material, CBG cannot assure that it will be able to pass on the increased costs to its consumers.

- **Glass cullet** is the main material for manufacturing amber glass bottles. APG cannot assure that the suppliers will be able to supply sufficient quantity of glass cullet and at reasonable price. Hence, APG may incur higher production cost for the glass bottles as APG may have to adjust its production formula by using other materials with higher cost than glass cullet such as increased use of glass sand and soda ash etc.

- **Natural gas** is an important raw material used in the production of amber glass bottles of APG. There is a risk where the price of natural gas could increase according to the change of the fuel oil price in Singapore, the USD-THB exchange rates volatility and the quantity of natural gas used per day. The increase of natural gas prices may result in the higher cost for APG.

1.9.3. Financial risks from fluctuation in exchanges rates

CBG generates revenue from the sales of Carabao Dang in foreign countries. Some of the exports sales are in USD currency, while almost all raw materials are procured domestically which, at present, the Group does not use any financial instruments to prevent such exchange rate fluctuation, posing risks from fluctuation in exchange rates for CBG. If the exchange rate is volatile, CBG’s pricing and sales may be affected. Moreover, if in the future CBG has additional investment in foreign currency, the Group could be exposed to the risk associated with such currency exchange rates.

1.9.4. Energy and electrolyte drinks are highly competitive products

Due to significantly high competition in the energy drinks market in Thailand, energy drinks and electrolyte drinks are highly competitive products among both existing market players and newcomers. In order to maintain or increase their market shares, each market players, including CBG, need to conduct marketing activities as well as utilizing budget allocated for advertising and public relations in a regular and continuous manner. As a result of this intense competition, CBG might be unable to maintain its market share or may incur significant marketing expenses.

1.9.5. International partners and oversea investment project

Normally, in exporting its products to foreign countries, CBG must rely on importers, agents and/or local distributors in each country where CBG export to. CBG has no policies to enter into long-term agreements with these importers, agents and/or local distributors, although CBD has extensive business relationship with such importers, agents and/or local distributors. CBG cannot assure that all of its importers, agent and local distributors will maintain its business relationship with CBG in the future.

Nevertheless, during Q4 2016, CBG would establish the subsidiary and invest in foreign subsidiaries, ICUK through indirect shareholding of two newly established subsidiaries namely CBGHK and CBGLUX. Such the investment and operations have carried the inherent risk of investment and exposes the company to country and currency risk outside Thailand.

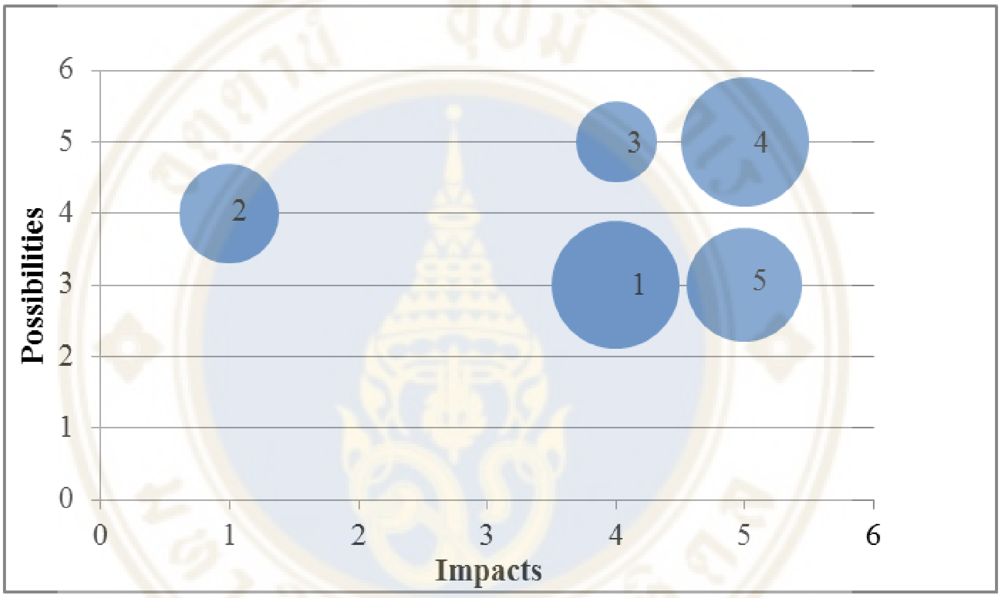


Figure 1.13: Risk Level

The figure above shows the risk level that is considered the impacts and possibilities may happen in the future. The number in the blue circle (*Figure 1.13*) represents each risk.

1. Change in government's policies
2. Volatility of raw material prices
3. Fluctuation in exchanges rates
4. Highly competitive products
5. International partners relationship

Table 1.19: Risk Matrix

Risk Matrix	Possibilities	Impacts
1. Change in government's policies	Since the product has contained with Caffeine, which is controlled by The Food and Drug Department so changing restriction may possibly happen in the future, as well as the main ingredient like 'sugar' that causes in many diseases so it is heavy burden to the government expenses to carry on so recently the controlling this drinks is what the government has focused on.	It is going to cost the raw materials and operation which definitely affect to the company's profit.
2. Volatility of raw material prices	It has low possibility to get price volatility as the company has power to bargain with suppliers and can order the materials in big amount.	The company has planned to do its business horizontally. Its raw materials have mostly been produced by subsidiaries, which make less impact than the market.
3. Fluctuation in exchanges rates	Most exports sales are in currency of USD, while most raw materials are procured domestically. However, currently the company has not protected any exchange currency rate so the fluctuation possibly happens.	It may impact if the world economy has volatile which is the main effect to its export sales.
4. Highly competitive products	It is definitely possible for mass product and low brand loyalty that make consumers focus on function rather than brand, many companies have to compete among them to maintain their market share.	High competition has much impact to market share. The company needs to conduct marketing activities, advertising and public relations.
5. International partners relationship	Exporting to foreign countries, CBG must rely on importers. Although CBD has extensive business relationship with importers but there are possible risks whether to maintain the relationship in the future.	It has so much impact when the company has problem in relationship in the future as the company relies too much in the single partner per country.

CHAPTER II

DATA

2.1 Company's Information

2.1.1 Business Structure

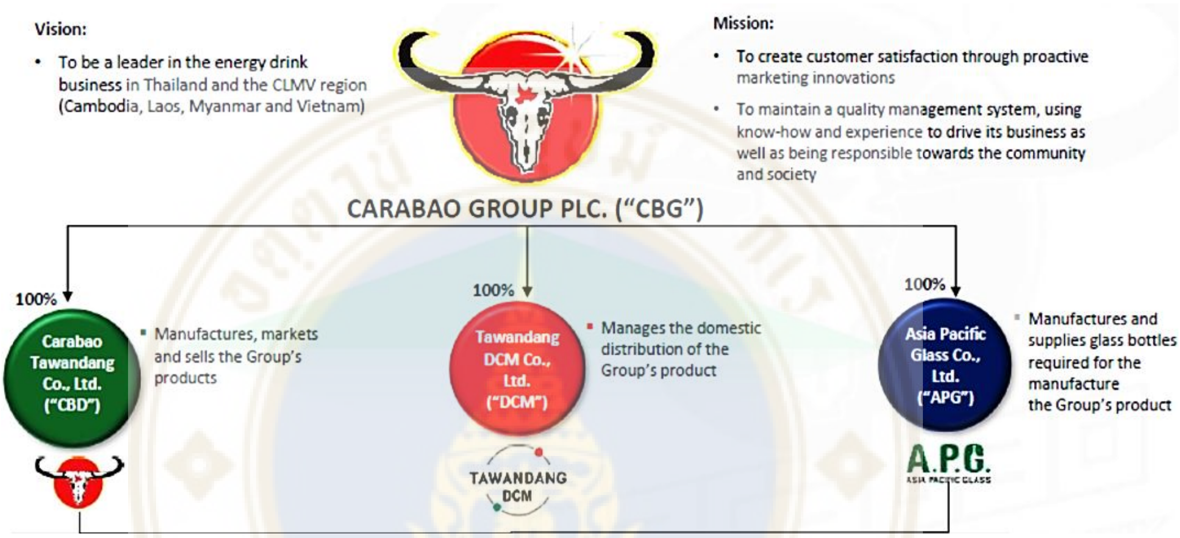


Figure 2.1: Company's Structure

Source: The Company Data

2.1.2. Major Shareholders and Free-float

Table 2.1: Major Shareholders

Shareholders' name	Number of share	Shareholding Percentage
1. Sathientham Holding Co.,Ltd.	250,064,500	25.01%
2. Ms. Nutchamai Thanomboonchareon	210,000,000	21.00%
3. Mr. Yuenyong Opakul	115,480,000	11.55%
4. Mr. Sathien Setthasit	47,974,100	4.80%
5. Northend Investment Limited	45,161,400	4.52%
6. Thai NVDR Co., Ltd.	38,548,668	3.85%
7. Mrs. Wongdao Thanomboonchareon	26,152,700	2.62%
8. Mrs. Linjong Opakul	26,145,800	2.61%
9. Bualuang Long-Term Equity Fund	22,852,000	2.29%
10. Bualuang Long-Term Equity Fund 75/25	16,340,700	1.63%

Source: The Company Data

Free-float	11 March 2016		1 April 2015	
% / No. Free-float	24.68%	2,661	25.00%	3,312

ผู้ถือหุ้นรายย่อย	11 มี.ค. 2559		01 เม.ย. 2558	
% /จำนวนผู้ถือหุ้นรายย่อย	24.68%	2,661	25.00%	3,312

การถือครองหุ้นต่างด้าว 8.67% (ณ วันที่ 02/12/2559) ข้อจำกัดหุ้นต่างด้าว 49.00%
การถือครองหุ้น NVDR 3.93% (ณ วันที่ 02/12/2559)

Source: The Company Data

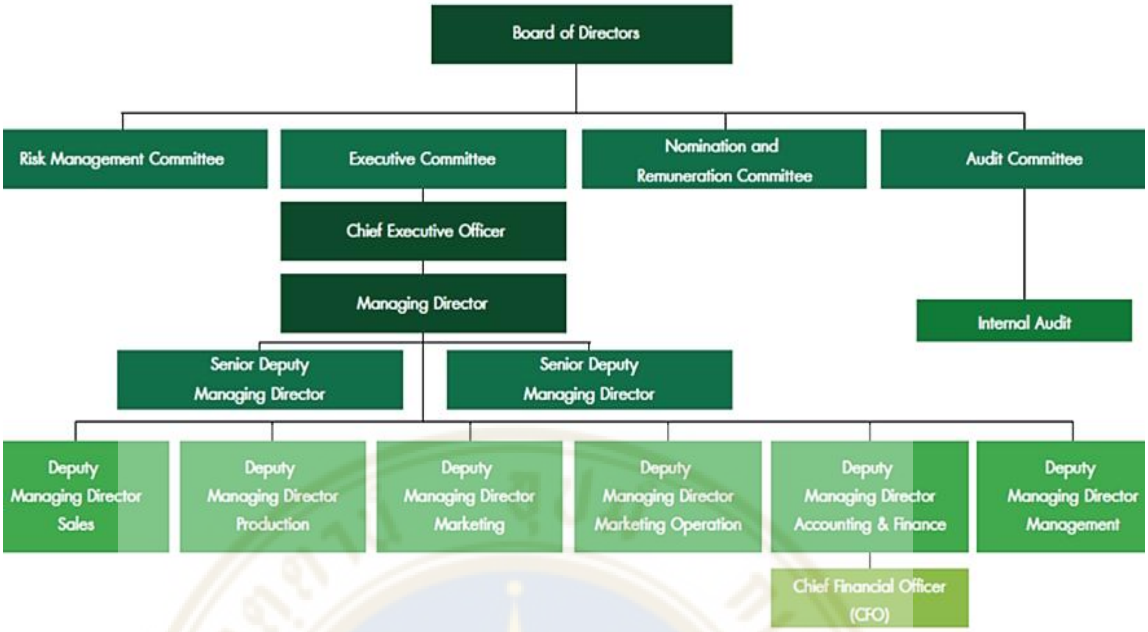
Figure 2.2: Percentage of Free float and minor shareholders

2.1.2. Management and Organizational Team

Source: The Company Data

Source: The Company Data

Figure 2.3: The Company's Management Team



Source: The Company Data

Figure 2.4: The Organization Structure

2.2. Distribution Channel

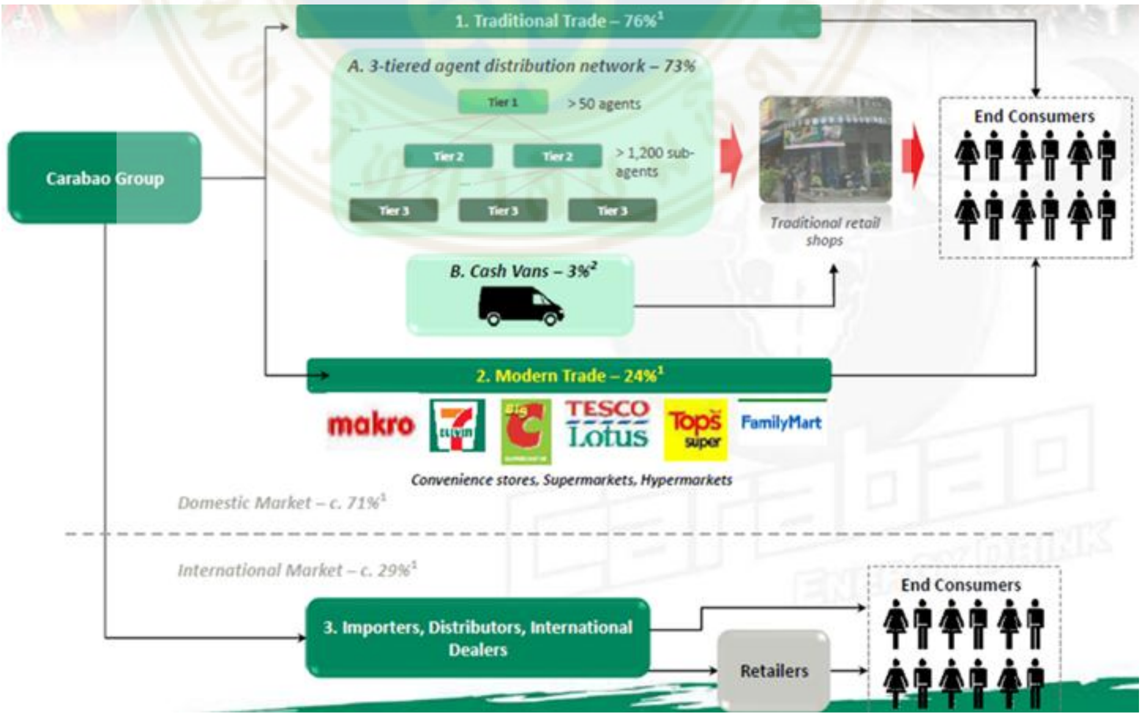


Figure 2.5: Distribution Network

Source: The Company Data

2.3. Corporate Governance (CG)

CBG, through its directors, executives, and staff, commits and adheres to good corporate governance principles in operating the Company, and regards good corporate governance principles as an important factor in promoting the overall success of the Company. The policy, covering principles related to rights of shareholders, equitable treatment of shareholders, roles of stakeholders, disclosure and transparency, and responsibilities of the board of directors, can be categorized into 5 categories as follows.

1. The Rights of Shareholders

CBG recognizes and values basic rights of shareholders, namely rights to sell, buy, or transfer shares, right to shares in the business profit, rights to sufficiently receive information about the business, rights to attend shareholders meetings to exercise the rights to vote in the appointment or removal of directors, appointment of auditors, and matters affecting the Company such as allocation of dividends, specification or amendment of Articles of Association and Memorandum of Association, reduction or increase of capital, and approval of special transactions, etc.

2. Equitable Treatment for Shareholders

It is the Company's policy to equitably and fairly treat and protect the rights of all shareholders, whether executive or non-executive shareholders, Thai or non-Thai, major or minor. The Company aims to provide additional channels for shareholders who cannot attend the meeting themselves to authorize independent directors or other persons as proxies who may attend the meeting and vote on behalf of the shareholders.

3. Roles of Stakeholders

The Company values the rights of stakeholders and treats all relevant parties equitably. The Company's stakeholders are shareholders, staff, customers, trade competitors, community, and society.

4. Disclosure and Transparency

The Company is committed to disclosing accurate, complete, and transparent information, both in terms of financial reports and general information, in accordance with the rules of the SEC and the SET, as well as essential information that impacts the price of the Company's shares, which affects the decision-making process of investors and stakeholders of the Company so that all relevant persons equally acknowledge such information.

5. Responsibilities of the Board of Directors

The Company requires the board of directors to comply with the code of best practice in accordance with the guidelines of the SET. The directors must understand and recognize their roles, duties, and responsibilities, and perform their duties in accordance with the law, the Company's objectives and the Articles of Association, shareholders' resolutions, the charter of the board of directors, and the Company's corporate governance policy with integrity and honesty, with priority given to the best interests of the Company and its shareholders.

The board of directors determines the policies, business goals, business plans, and the budget of the Company, and governs the management division to ensure compliance with the policies, plans, and budget specified with efficiency and effectiveness, for the best interests of the Company and its shareholders.

2.4. SWOT Analysis

Strengths

- **Strong image and well-known to consumers**

  CBG associates with Thai legendary for-life-music band "Carabao" and Carabao Dang is the trademark using the band's name which is the most successful "for-life-music" band. The lead singer of the band, Mr. Yuenyong Opakul, also known as "Aed Carabao". As well as, the company's trademark also uses Carabao band's figure to appeal working class labors, which is the Group's target customer.

- **20 countries worldwide export**

CBG exports its products to more than 20 countries worldwide and seek to increase its market share and to penetrate new markets continually.

- **Marketing innovation**

Marketing is an important strategy for the company, which make its product differentiate from competitors and has contributed to the continuous growth of the business and market share. There are several marketing innovations that the firm used as follows.

  - Employing its own marketing operation team, especially the Bao Dang Girls Team who initiated more than 400,000 activities per year nationwide to create products demand and full coverage product distribution.
  - Differentiated product positioning by positioning the product in the same price of competitors, and differentiate by adding vitamin B12 into its product. The firm aims to publicize this differentiation to consumers and distribution channels in order to increase consumer awareness and urge consumers to first try.

- **Vertically integrated business model**

That causes the cost synergies, raw material supply stability and quality control capability. For example, the company has capable of producing glass bottles, energy drinks and electrolyte drinks, and managing the distribution of products domestically by its own personnel. So it can be better control costs structure, the manufacturing process, and product quality to meet the needs. Additionally, DCM make CBG gains access to the target customers and distribution channels more efficiently.

- **Distribution network cover all areas**

In 2016, CBG can distribute over 95% to nationwide and cover over 300,000 retail stores. This is because CBG having its own distribution network; DCM.

Weaknesses

- **Less product diversification line than competitors**

Since CBG has relied on a single product, which is the energy drink, while competitors have different kinds of beverages or favors. However, CBG has already realized in this point so recently it launched the new product line; coffee 3-in-1 and also aim to boost the electrolyte drink; Start Plus.

- **Highly dependent on the legendary Carabao band**

Since the company has relied on the lead singer, Mr. Yuenyong Opakul, has also known as "Aed Carabao" as its Brand ambassador.

- **Difficulty in penetrating the upper market segment**

It is because of brand image which customers associate with mid-to-low income group.

Opportunities

- **Less new entry can come in the market**

Since the supplies are over the demands in the market so it has high competition.

- **Vast room for market penetration abroad**

Since the energy drink is specific product that international interested e.g. in US, currently, the energy dink has a great number of consumption.

Threats

- **Government's regulatory controls**

There is limited consumption per day, not more than two bottles (limitation from Food and Drugs Department) and also because of the quantity of caffeine, so the volume of product is depended on the population in the market.

- **Non-healthy beverage**

Since it contains a lot of sugar and caffeine, so it is not good nutrition even though there are including vitamins.

- **Lower price and variety of substitutes product**

There is high bargaining power from consumer and many substitute products from alternative beverages e.g. coffee, tea and functional drinks.

- **Slow expansion of Thailand's energy drink market**

Due to uncertainty in economic situation in Thailand, as well as natural disaster which affected to agricultural product, it was directly affected to low – middle income people who is the major customer of energy drink market.

2.5. Five-Force Analysis

Bargaining power of Buyers (High) - Opposed to CBG

Main buyer of the company is agencies (retailers) who the company distributes products to. This group has a lot of bargaining to the firm in term of getting higher margin between the prices. So it means the agencies willing to sell if they get better margin. In additional, most energy drinks price is at THB10 so far and hardly to increase the price as the customer group is low-middle income. So it is the limited point to CBG.

Bargaining power of suppliers (Low) - Favorable to CBG

Since the company has sold in the mass market so it needs to produce in high volumes so CBG could bargain to its suppliers. Additional, the main material, such as amber glass bottles, has been produced by its own company so it is hard that suppliers will have the bargaining power to the company.

Threat of new entrants (Low) - Favorable to CBG

When consider on Thai's consumption behavior about the energy drink, Thai prefers consuming bottled energy drinks rather than canned energy drinks. This main point make it difficult for international companies to compete in Thailand so the majority market share is belonged to Thai companies. However, even the new entrants are Thai companies, it is still difficult to start business as nowadays there are high competitive in the market. According to Nielsen's evaluation, the energy drinks market in Thailand has grown at a CAGR of 2.6% between 2012 and 2015. It show that the energy drink industry does not have high growth rate that can be interested the new entrants to invest in this business. As well as it is perfect competition that has fixed market price of energy drink at 10 THB so the new companies can hardly compete with the existing companies.

The cause that make the new entrants difficult to get in the market;

- Mass market and low-price selling
- Using Economic of scales to gain profit
- Only big company can entry

Threat of substitute products (High) - Opposed to CBG

Most energy drinks are contained with caffeine, water, sucrose (sugar) and vitamins that make drinker feel awake. The main reason is because of caffeine which also has in some food and drinks such as coffee and tea. Therefore, most people who prefer coffee or tea will not consume the energy drink in a day. So the company that produces coffee or tea can indirectly compete to the energy drink industry. However, it is only indirect competitors which it may have less impact as it has different price and target group of customers. In addition, the tea and coffee market is high competition and has more competitors rather than the energy drink's market.

Intense rivalry among existing players (High) - Opposed to CBG

In Thailand, it has a few main players e.g. M-150, Shark, Carabao Dang and Red Bull. M-150 is the market leader if considering in Thai market, whereas Red Bull is the market leader in global level. Even though, there is a small number of brands but it has high competitive among the companies to maintain or increase their market shares. It can consider from various forms of marketing and advertising through media such as television, newspaper, magazines, and activities e.g. lucky draw prizes, concerts, and being sponsor of sports.

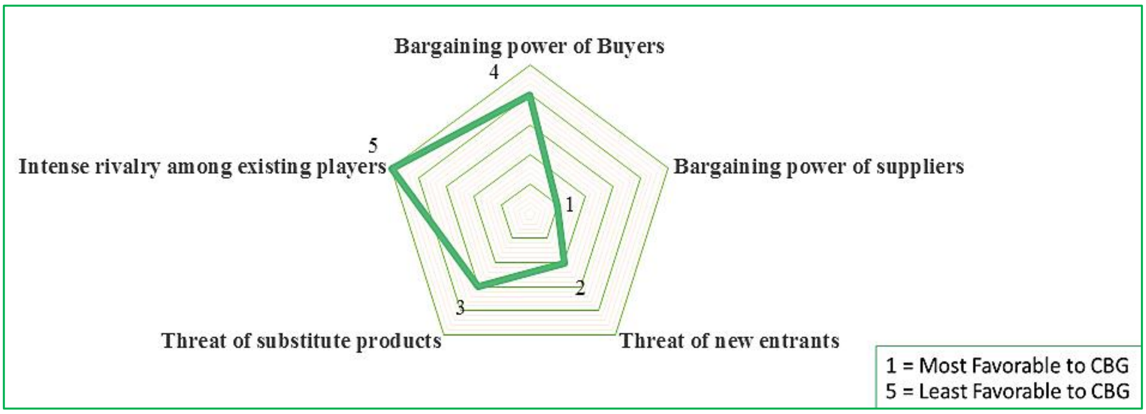


Figure 2.6: Five-Force Model

2.6. Sales growth projection

Table 2.2: Percentage of Sales Growth Rate Projection

Key Assumption	2016	2017	2018	2019	2020
Sales growth rate (%):					
Domestic sales	17%	6%	6%	4%	4%
Overseas sales	56%	31%	26%	18%	18%
Overall sales	28%	15%	15%	11%	11%

Sales growth projection was separately between domestic sales channel and oversea sales channel.

The domestic sales channel also divided into sub-channel which are Traditional Trade (Agent), Cash Van, and Modern. In forecasted 2016, it is projected that Traditional Trade (Agent) and Modern channel are approximately 2% - 3%. According to Thailand's energy drink CAGR growth between 2012 and 2015 is 2.6%.

Table 2.3: Domestic Sales Projection

	2015A	2016F	2017F	2018F	2019F	2020F
Traditional Trade (Agent)	3,998	4,060	4,319	4,594	4,800	5,016
Growth rate %		2%	6%	6%	4%	4%
Traditional Trade (Cash Van)	164	984	1,047	1,113	1,163	1,216
Growth rate %		499%	6%	6%	4%	4%
Modern Trade	1,314	1,348	1,434	1,525	1,594	1,665
Growth rate %		3%	6%	6%	4%	4%
Total Sales	5,477	6,392	6,800	7,233	7,557	7,896
Growth rate %		17%	6%	6%	4%	4%

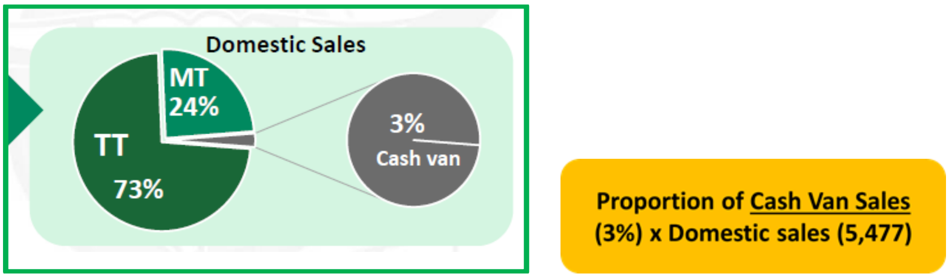


Figure 2.7: Domestic Sales Proportion

The sales growth of cash van was emphasized to make a change in domestic sales due to essential strategy of CGB. The proportion of cash van to total proportion of domestic sales that was equal to 3% (Cash van started launching since Q2 2015, with 9 distribution centers) and calculated with amount of domestic sales in 2015, 5,477 mb. Therefore, the cash van sales in 2015 were 164 mb. Therefore, referring to cash van target in 2016 that was about 30 distribution centers, the cash van sales could be estimated to be 984 mb.

In 2016, CBG has launched the new various products types, so expected domestic sales growth approximately 6% and 4% in 2017 and 2020 (two stage model) because the new products types would not be well-known enough to compete with existing leader brand and maintain its sales growth.

Table 2.4: International Sales Projection

GDP CAGR '14 - 18	
Cambodia	9%
Myanmar	10%
Vietnam	7%

UK energy drink market growth
12%

Source: The Company Data

	2015A	2016F	2017F	2018F	2019F	2020F
Cambodia	1,547	2,379	3,134	4,122	4,963	5,976
Growth rate %		54%	32%	32%	20%	20%
Afghanistan	165	396	404	413	421	430
Growth rate %		140%	2%	2%	2%	2%
Yemen	167	167	167	167	167	167
Growth rate %		0%	0%	0%	0%	0%
Myanmar	223	309	407	535	645	777
Growth rate %		38%	32%	32%	21%	21%
Vietnam	98	136	179	235	281	335
Growth rate %		38%	32%	32%	19%	19%
Others	76	89	105	123	140	158
Growth rate %		18%	18%	18%	13%	13%
UK	-	72	249	279	313	350
Growth rate %			246%	12%	12%	12%
Total Oversea Sales	2,276	3,548	4,645	5,874	6,929	8,194
Growth rate %		56%	31%	26%	18%	18%

For the oversea sales projection, the sales were projected by separating to each country channel.

The top overseas sales country is Cambodia. As the result of the new product that CBG has launched in Q2, 2015, the projection of Cambodia sales in 2016 would approximately be 54% as same as the sales growth in 2015.

For Afghanistan, because of the political issues, the sales were dropped from 531 mb to 165 mb at the end of 2015. However, there was better progress in the political issue in the beginning of 2016, the sales in Afghanistan could recover to approximately to 396 mb.

For the projection of Myanmar and Vietnam, The sales estimated between 2016 and 2020 (using of CAGR of CLMV growth rate during 2013 to 2015) resulted that the projection sales growth rate was slightly declining from 38% in 2016 to approximately 21% in 2020.

CBG had a plan to launch the new product of "Carabao Carbonated UK" in UK market in Q4 2016 so the company invested in ICUK subsidiary in order to get competitive advantage in the market. The sales would be approximately 250 mb or 2% proportion of total sales. These were calculated from sales quantity of 30 million units (1% of UK market share by management expectation) with average sales price of 8.32 Baht per "Carabao Carbonated" can. After 2017, the sales to UK would be expected to grow 12% per annum referring to UK's energy drink market growth rate.

Market Value of energy drink UK market (Pound)	3,578	Million Pound
Pound per THB	44	Pound / THB
Market Value of energy drink UK market (THB)	156,800	Million THB
Management Expectation in 2017	1%	
Value sales in UK	1,568	Million THB
Selling price of Pound in UK	1.2	Pound / unit
Pound per THB	44	Pound / THB
Selling price of THB in UK	52	Baht / Unit
Value sales in UK	1,568	Million THB
Selling price of THB	52	Baht / Unit
Sales in Units	30	Million units
Average selling price of Carbonated Can	8.32	Baht / Unit
Total UK revenue	249	Million THB

Figure 2.8: UK revenues

2.7. Cost of Goods Sold Projection

Table 2.5: Projected Gross Profit and Sales proportion

Key Assumption	2016	2017	2018	2019	2020
Gross Profit margin (%)					
Domestic	39%	39%	45%	45%	45%
Overseas	32%	32%	32%	32%	32%
Sales Proportion					
Domestic	64%	59%	55%	52%	49%
Overseas	36%	41%	45%	48%	51%
Overall GP margin (%)	37%	36%	39%	39%	39%
Overall COGS margin (%)	63%	64%	61%	61%	61%

The cost of goods sold margin was calculated from gross profit of each domestic or overseas sales multiplied with sales proportion of domestic or overseas, then it would get overall gross profit margin and using it subtracted from 1 to get overall cost of goods sold in each year projection. According to historical gross profit margin, gross profit margin of domestic sales was increased from 33% to 38% or approximately 16% increasing since the first amber glass production plant commenced production in August, 2014. Therefore, the significant change in gross profit margin of domestic sales would be the same as in the past since the other amber glass production plant would finish construction and start to production in Q4, 2017 so the gross profit would be changed to 39% to 45% in 2017 and 2018, respectively. As the result, overall cost of goods sold margin would decrease to 61% in 2018 onward.

2.8. Selling, Administrative, and Depreciation Expense Projection

Table 2.6: Selling and Administrative Expense Projection

Key Assumption	2016 to 2020
Selling and Administrative Expense proportion with sales	
Selling expenses	14%
Administrative expenses	2%

Table 2.7: Depreciation Expense Projection

Key Assumption	2016 to 2020
Depreciaton and Amortisation Expense proportion with Average beginning and ending of Property, plant and equipment & Intangible assets	
Depreciation & Amortisation rate	5%

Selling and administrative expenses would be projected proportion with sales as 14% and 2% from 2016 to 2020. The selling and administrative expense assumption was calculated from average percentage of S&A expenses per sales during 2013 to 2015.

However, depreciation and amortization expenses separately projected from selling and administrative expenses. Depreciation and amortization expense was projected as 5% by using depreciation rate multiplied by average beginning and ending of fixed and intangible assets from 2016 to 2020.

2.9. Net Working Capital Projection

Table 2.8: RCP, ICP, and PDP Projection

Key Assumption	2016 to 2020
Trade and other receivables Using of average Receivables Collection Period (RCP)	15 days
Inventories Using of average Inventory Conversion Period (ICP)	20 days
Trade and other payables Using of average Payables Deferral Period (PDP)	65 days

The projection of Trade and other receivables, Inventories, and Trade and other payables were calculated by using average RCP (15 days), ICP (20 days), and PDP (65 days) from 2013 to 2015 and it would be forecasted as follows;

- Trade and other receivables was calculated as sales projection of each year divided by 365 and then multiplied by average RCP (15 days).
- Inventories were calculated as cost of goods sold of each year divided by 365 and then multiplied by average ICP (20 days).
- Trade and other payables was calculated the change in inventories added with cost of goods sold of each year, then divided by 365 and multiplied the average PDP (65 days).

2.10. Property, plant and equipment & Intangible assets Projection

Figure 2.9: CBG Investment Plan Source: The Company Data

Management of CBG has already determined the strategic investment plan in fixed assets during 2016 and 2017 as follows.

- Amber Glass Production Plant increased production capacity for amber glass bottle. Investment budget was around 1,243mb which construction would start on Q3 2016 and the amber glass production plant would finish construction and start to production in Q4, 2017. Thus, the projection would separate the increasing of fixed assets in two periods that was 2016 and 2017 equally.

- New plant could increase the filling production capacity. Investment budget was around 1,377 mb and the construction would start on Q3, 2016 and finish during Q1, 2017. Thus, the fixed assets would be increased in 2016 for whole amount.

- CBG also purchased more lands and production machinery for 352 mb during 2016.

Therefore, the fixed and intangible assets projection from 2018 to 2020 was applied from the average fixed and intangible assets turnover (1.6 times) during 2013 to 2017.

2.11. Financial Statement Projection

Income Statement

Table 2.9: Income Statement Projection

Income Statement (Million THB)	2013A	2014A	2015A	2016F	2017F	2018F	2019F	2020F
Sales	6,863	7,448	7,753	9,940	11,444	13,107	14,487	16,090
Cost of sales	4,793	4,939	4,893	6,310	7,301	7,944	8,835	9,876
Gross Profit	2,070	2,510	2,860	3,630	4,143	5,163	5,651	6,214
Selling and Administrative Expenses	1,075	1,101	1,244	1,540	1,773	2,031	2,245	2,493
Depreciation and amortisation	107	174	236	291	365	397	433	480
Other expenses	33	-	35	31	35	41	45	50
Other income	66	126	121	157	157	157	157	157
Income from ICUK	-	-	-	-	-	-	28	58
EBIT	922	1,361	1,466	1,925	2,126	2,851	3,112	3,406
Finance cost	136	112	2	48	95	95	95	95
EBT	786	1,250	1,465	1,877	2,031	2,756	3,017	3,311
Income tax expenses	159	238	209	268	290	394	431	473
Profit for the year	626	1,012	1,256	1,609	1,741	2,363	2,587	2,838
Profit to Non-Cotrolling Interest	114	99	-	-	-	-	-	-
Profit to Shareholder	512	913	1,256	1,609	1,741	2,363	2,587	2,838
Weighted average no. of ordinary shares	429	750	1,000	1,000	1,000	1,000	1,000	1,000
EPS	1.19	1.22	1.26	1.61	1.74	2.36	2.59	2.84
EBITDA	1,029	1,535	1,702	2,215	2,491	3,248	3,546	3,886
Tax rate	20%	19%	14%	14%	14%	14%	14%	14%

Balance Sheet

Table 2.10: Balance Sheet Projection

Balance Sheet (Million THB)	2013A	2014A	2015A	2016F	2017F	2018F	2019F	2020F
Assets								
Cash and cash equivalents	486	528	1,377	1,430	1,572	2,027	2,224	2,414
Current investments	-	900	473	473	473	473	473	473
Trade and other receivables	251	308	425	395	455	521	576	640
Short-term loans to related parties	329	-	-	-	-	-	-	-
Inventories	206	318	249	339	392	426	474	530
Other current assets	44	65	17	41	25	28	31	35
Total Current Assets	1,315	2,120	2,542	2,679	2,917	3,476	3,779	4,092
Investment properties	139	136	108	108	108	108	108	108
Property, plant and equipment & Intangible assets	3,810	4,771	4,683	6,966	7,655	8,254	9,122	10,132
Other non current assets	46	37	29	48	43	50	55	61
Investment in CBGHK >> ICUK	-	-	-	341	341	341	341	341
Total Assets	5,310	7,064	7,361	10,142	11,064	12,228	13,405	14,735
Liabilities and shareholders' equity								
Trade and other payables	970	797	802	862	1,061	1,219	1,322	1,472
Short - term loan	879	30	-	-	-	-	-	-
Other current liabilities	183	144	150	216	221	253	280	311
Total Current Liabilities	2,032	971	951	1,079	1,282	1,472	1,602	1,783
Long - term loan	2,075	-	-	2,000	2,000	2,000	2,000	2,000
Other non current liabilities	55	64	77	87	111	142	155	171
Total liabilities	4,162	1,035	1,028	3,166	3,393	3,613	3,757	3,954
Share capital issued and fully paid up	620	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Share premium	-	3,963	3,963	3,963	3,963	3,963	3,963	3,963
Retained earnings:								
Appropriated - statutory reserve	-	51	94	100	100	100	100	100
Unappropriated	- 0.3	582	844	1,481	2,176	3,119	4,152	5,285
Other components of shareholders' equity	528	432	432	432	432	432	432	432
Total shareholders' equity	1,148	6,029	6,333	6,976	7,671	8,615	9,647	10,780
Total liabilities and shareholders' equity	5,310	7,064	7,361	10,142	11,064	12,228	13,405	14,735

Statement of Cash Flow

Table 2.11: Cash Flow Statement Projection

Statement of Cash Flow (Million THB)	2016F	2017F	2018F	2019F	2020F
Cash flow from operation					
Net Income	1,609	1,741	2,363	2,587	2,838
Depreciation and Amortization	291	365	397	433	480
Change in net working capital	43	106	86	24	58
Change in non-current assets	- 19	5	- 6	- 5	- 6
Change in non-current liabilities	11	24	30	14	16
Change in others	- 291	- 365	- 397	- 433	- 480
Total cash from operation	1,644	1,876	2,473	2,620	2,905
Cash flow from investing					
CAPEX	- 2,284	- 689	- 599	- 869	- 1,010
Long-term investment in subsidiary	- 341	-	-	-	-
Total cash from investing	- 2,625	- 689	- 599	- 869	- 1,010
Cash flow from financing					
Long-term loan from financial institution	2,000	-	-	-	-
Dividend paid	- 967	- 1,046	- 1,419	- 1,554	- 1,705
Total cash from financing	1,033	- 1,046	- 1,419	- 1,554	- 1,705
Net cash change	53	142	455	197	191
Beginning cash	1,377	1,430	1,572	2,027	2,224
Ending cash	1,430	1,572	2,027	2,224	2,414

Key Financial Ratios

Table 2.12: Financial Ratio Projection

Key Financial Ratio	2013A	2014A	2015A	2016F	2017F	2018F	2019F	2020F
Profitability								
Gross Profit Margin (%)	30.2%	33.7%	36.9%	36.5%	36.2%	39.4%	39.0%	38.6%
EBIT Margin (%)	13.4%	18.3%	18.9%	19.4%	18.6%	21.8%	21.5%	21.2%
EBITDA Margin (%)	15.0%	20.6%	22.0%	22.3%	21.8%	24.8%	24.5%	24.2%
Net Profit Margin (%)	9.1%	13.6%	16.2%	16.2%	15.2%	18.0%	17.9%	17.6%
SG&A/Sales (%)	15.7%	14.8%	16.0%	15.5%	15.5%	15.5%	15.5%	15.5%
ROA (%)	13.2%	16.4%	17.4%	18.4%	16.4%	20.3%	20.2%	20.2%
Capital Structure Leverage (x)	5.25	1.72	1.17	1.32	1.45	1.43	1.40	1.38
ROE (%)	69.3%	28.2%	20.3%	24.2%	23.8%	29.0%	28.3%	27.8%
Turnover Ratios								
Total Assets Turnover (x)	1.4	1.2	1.1	1.1	1.1	1.1	1.1	1.1
AR Turnover (x)	29.0	26.6	21.1	24.2	26.9	26.9	26.4	26.5
Inventory Turnover (x)	20.0	18.9	17.3	21.5	20.0	19.4	19.6	19.7
FA Turnover (x)	2.0	1.7	1.6	1.7	1.6	1.6	1.7	1.7
AP Turnover (x)	5.1	5.7	6.0	7.7	7.6	7.0	7.0	7.1
Short-Term Liquidity Risk								
Current Ratio (x)	0.6	2.2	2.7	2.5	2.3	2.4	2.4	2.3
Quick Ratio (x)	0.4	1.8	2.4	2.1	2.0	2.1	2.0	2.0
Inventory Conversion Period (ICP) (days)	18	19	21	17	18	19	19	19
Receivables Collocaton Period (RCP) (days)	13	14	17	15	14	14	14	14
Payables Deferral Period (PDP) (days)	71	64	60	47	48	52	52	51
Cash Conversion Cycle (CCC) (days)	- 41	- 31	- 22	- 15	- 16	- 20	- 20	- 19
Long-Term Solvency Risk								
Debt Ratio (%)	72.0%	0.5%	0.0%	22.3%	20.7%	18.8%	17.2%	15.6%
D/E Ratio (x)	2.6	0.005	-	0.29	0.26	0.23	0.21	0.19
Time Interest Earn (TIE) (x)	6.8	12.2	894.4	40.5	22.4	30.0	32.8	35.8

2.12. Weighted Average Cost of Capital

The most of WACC component is extracted from the proforma financial statements. Additionally, the risk premium rate was valued by Professor Aswath Damodaran as of June 2016.

Table 2.13: Weighted Average Cost of Capital Components

Weighted average Cost of Capital		
Weight of debt	3%	Total equities from Statement of Financial Position (2016F)
Weight of equity	97%	
Cost of debt	4.07%	Cost of long-term loan (pre-tax)
Cost of equity	8.40%	
Average beta	0.79	From Nov 2014 – Nov 2016
Risk Premium	8.76%	Based on Moody's rating and adjusted by the relative equity market volatility.
Risk free rate	2.74%	10-year government bond yield duration base

For the weight of debt, I used book value which would occur during 2016 - 2017 for 2,000 mb (Long-term loan) but for the weight of equity, it used market value to reflect the actual situation. The market value of the company equities was calculated from the number of shares multiplied with a current price, 76.50 Baht per share. Therefore, the ratio between the equity and debt is 97:3.

Beta

Using the average beta reflected overall beta rather than the daily beta (0.6) in the SET Smart and since the CBG stock price currently has risen rapidly so using the average beta of 0.79 was reasonable.

Risk Premium

According to Asward Damodaran Research, the country risk represented the market premium.

Risk Free Rate

10-year Thai government bond yield was represented the risk free rate that was 2.74%.

Cost of Equity

The cost of equity was calculated based on the CAPM method so the result was the percentage of 9.6.

Cost of Debt

Based on the interest rate from the long-term loan in 2012, the company used the floating rate of MLR – 2.00%. Hence, I also used the similar method as in the past: 6.75% - 2.00% = 4.75%. (The post-tax: 4.07%, assuming the tax rate 14%)

2.13. Terminal Value

Table 2.14: Projected Sales Proportion

	2015A	2016F	2017F	2018F	2019F	2020F
Domestic Sales	**70.64%**	**64.31%**	**59.42%**	**55.18%**	**52.17%**	**49.08%**
Cambodia	19.95%	23.93%	27.38%	31.45%	34.26%	37.14%
Afghanistan	2.13%	3.98%	3.53%	3.15%	2.91%	2.67%
Yemen	2.15%	1.68%	1.46%	1.27%	1.15%	1.04%
Myanmar	2.88%	3.11%	3.55%	4.08%	4.45%	4.83%
Vietnam	1.26%	1.36%	1.56%	1.79%	1.94%	2.08%
UK	0.00%	0.72%	2.18%	2.13%	2.16%	2.18%
International Sales	**29.36%**	**35.69%**	**40.58%**	**44.82%**	**47.83%**	**49.94%**
Total Sales	**99.02%**	**99.10%**	**99.08%**	**99.06%**	**99.04%**	**99.02%**

The constant growth

In long term growth of the company, I calculated depending on the population growth and GDP consensus growth in each region, and then weighted with the proportion of sales forecast in 2020.

Table 2.15: Constant Growth Projection

	Weight	Population growth[1]	GDP growth[2]	Constant growth
Domestic Sales	**49.08%**	**0.2%**	**3.08%**	**1.60%**
Cambodia	37.14%	1.5%	6.91%	3.14%
Afghanistan	2.67%	2.3%	3.43%	0.15%
Yemen	1.04%	2.3%	4.79%	0.07%
Myanmar	4.83%	0.9%	7.84%	0.42%
Vietnam	2.08%	1.0%	6.22%	0.15%
UK	2.18%	0.6%	2.11%	0.06%
International Sales	**49.94%**			**3.99%**
Total Sales	**99.02%**			**5.59%**

[1] In 2020
[2] Average among 2016 - 2020

Terminal Value

The cash flow (CF) was chosen from the latest cash flow from the high growth, which was CF in 2020 and multiplied with the one plus the growth of 5.59%, and divided by the percentage of WACC (9.5%) after the constant growth (5.59%).

2.14. Free Cash Flow to Firm Model

Table 2.16: FCFF and Enterprise Value Projection

FREE CASH FLOW TO FIRM	2017F	2018F	2019F	2020F
NOPAT	1,823	2,444	2,668	2,919
CAPEX	689	599	869	1,010
DEPRECITAION	365	397	433	480
NET WORKING CAPITAL	-106	-86	-24	-58
CASH FLOW	1,605	2,328	2,257	2,447
TERMAINAL VALUE				66,755
WACC	9.5%	9.5%	9.5%	9.5%
DISCOUNTED CASH FLOW	1,466	1,943	1,721	1,705
DISCOUNTED TERMINAL VALUE				46,496
TOTAL	1,466	1,943	1,721	48,201
ENTERPRISE VALUE				**53,330**

FCFF	53,330
Total Debt	2,000
Cash	1,430
Value Equity	**52,761**

Target price	52.76
Dividend	0.97
Current price	76.50
Downside	**-31.03%**

2.15. Free Cash Flow Sensitivity Analysis

Currently, CBG has focused on the distribution strategy over a year to coverage nationwide, as well as the international market the company has exported over 20 countries worldwide and seek to increase new market penetration. Recently, it just launched its products to the new market, United Kingdom, which would be one of the plans to start in Europe after it has been successful CLMV. The company began with a large platform of distribution network by signing of Principal Partner agreement with Chelsea, one of the top Premier League football clubs in the UK, in pursuit of reflecting world-class image of its products and created brand awareness "WORLD CLASS TEAM WORLD CLASS PRODUCT". This would be a new challenge of the new role that the firm has not taken before, it was not only exporting to the partnership distributor but to be a part of distributor, which hopefully the company would take a lot of sales and returns in coming years (Good Senario). However, it is also worried about the invisible costs or expenses that the company would take in the new investments, as well as uncertainty economic situation (Bad Scenario).

I still look the company in the good case as being in the Europe market as the self-distributor, especially in UK, would be a good sign in the long run. As well as, the accelerate of opening DCs has been following its plan each year (2014 - 2017) and would be up to 95% covering nationwide which support the company distribution and a number of customer based in the traditional channel. In additional, it is also the company's opportunity in the future if there are new product lines without the energy drink. I expect that the company could grow further in the long run, especially in international market. Since the market leader currently has been Red Bull which its growth in Asia Pacific has been around 8% and Europe region (premium product) around 5% (Growth prospect CAGR 2012-2017), as long as it still has customer demand and being popular in worldwide, CBG would have a gap and generate its growth following Red Bull. I expect that the growth rate would be around 6% to 7%.

In term of the bad case, the company may get growth rate not less than 3% which it would be the same amount of value at the beginning of 2016.

For WACC, the company had heavy investment in the part of shareholders' equity so it was no doubt if the cost of capital was high. In contrast, it could tell that the company still has room for borrowing to get WACC decrease.

Since there are potential to occur unexpected outcomes so in order to cover all situations, I applied the sensitivity analysis based on the cost of capital (WACC) and the constant growth which may decline or progress in the future.

Table 2.17: Sensitivity

Sensitivity :The Enterprise Value

unit: mb	Growth					
WACC	-2.00%	1.00%	3.00%	5.59%	6.00%	7.00%
8.0%	24,702	33,028	44,130	85,941	102,414	199,554
9.5%	21,408	27,179	34,002	53,330	59,016	80,895
10.0%	20,402	25,509	31,347	46,789	51,048	66,370
12.0%	17,338	20,732	24,251	32,078	33,929	39,735
14.0%	15,047	17,430	19,740	24,368	25,371	28,321

Sensitivity :The value of equity

unit: mb	Growth					
WACC	-2.00%	1.00%	3.00%	5.59%	6.00%	7.00%
8.0%	24,132	32,459	43,560	85,371	101,845	198,985
9.5%	20,839	26,609	33,433	52,761	58,446	80,326
10.0%	19,832	24,940	30,777	46,219	50,478	65,801
12.0%	16,769	20,162	23,681	31,509	33,359	39,166
14.0%	14,478	16,860	19,170	23,799	24,802	27,752

Sensitivity :CBG's stock price

unit: Baht	Growth					
WACC	-2.00%	1.00%	3.00%	5.59%	6.00%	7.00%
8.0%	24.13	32.46	43.56	85.37	101.84	198.98
9.5%	20.84	26.61	33.43	52.76	58.45	80.33
10.0%	19.83	24.94	30.78	46.22	50.48	65.80
12.0%	16.77	20.16	23.68	31.51	33.36	39.17
14.0%	14.48	16.86	19.17	23.80	24.80	27.75

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