

**DISCOUNTED CASH FLOW VALUATION OF CARABAO  
GROUP PUBLIC COMPANY LIMITED**



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**A THEMATIC PAPER SUBMITTED IN PARTIAL  
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TAWANDANG PUBLIC COMPANY LIMITED**

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## **DISCOUNTED CASH FLOW VALUATION OF CARABAO GROUP PUBLIC COMPANY LIMITED**

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M.M. (CORPORATE FINANCE)

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### **ABSTRACT**

The objective of this thematic paper is to evaluate Carabao Group (CBG) stock using a discounted cash flow (DCF) valuation model based on forecasted future cash flows. According to the stock market, where the investor could do the buy and sell transactions on the listed business. The stock price in both internal and external factors contribute to price volatility. The purpose is to evaluate the company so that investors can decide whether to "BUY, HOLD, or SELL" the stock.

Carabao Group (CBG) is a large Thai company listed in SET50 Index. The core business was divided into Energy Drink, amber bottles, aluminum cans, and the other products

From this thematic paper, the target price of CBG's stock was THB 139.73, providing a downside of -6.54% compared to the current price of THB 149.5 per share as of July 7th, 2021. Therefore, the valuation is indicative to "HOLD" the stock.

**KEY WORDS:** CBG/ Valuation/ Discounted Cash Flow/ SET50 Index/ Energy Drink

48 pages

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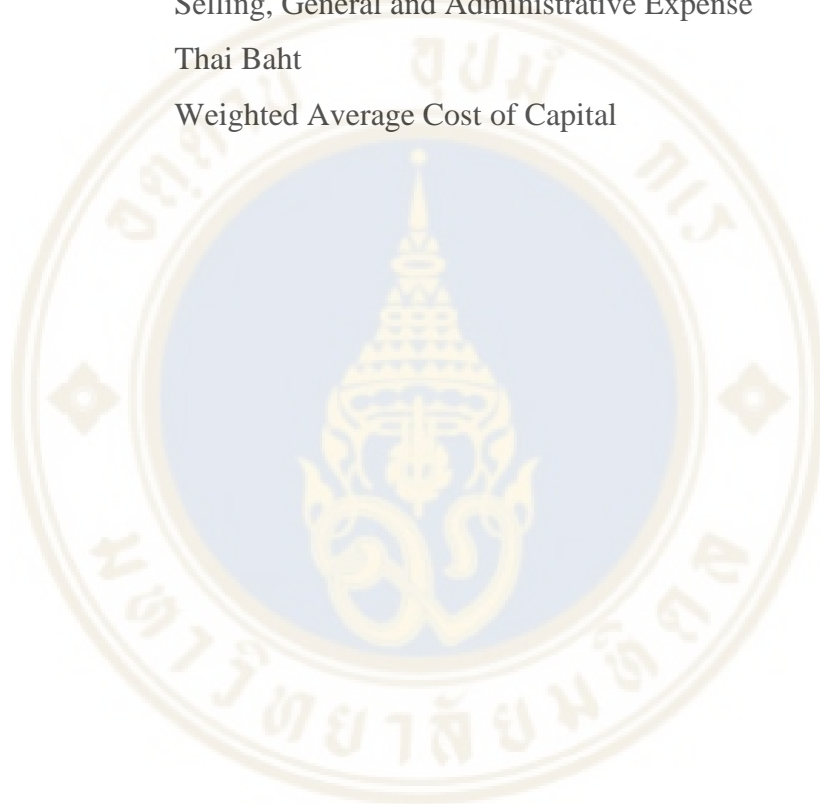


## LIST OF ABBREVIATIONS

CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CBG	Carabao Group Public Company Limited
CLMV	Cambodia, Laos, Myanmar, and Vietnam
COGS	Cost of Goods Sold
COVID-19	Coronavirus disease starting in 2019
DCF	Discounted Cash Flow
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EPS	Earnings Per Share
EV	Enterprise Value
FY	Fiscal Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
KO	The Coca-Cola Company
MNST	Monster Beverage Corporation
OEM	Original Equipment Manufacturer
OSP	Osotspa Public Limited Company
P/BV	Price to Book Value Per Share
P/E	Price to Earnings Per Share
PEPSI	PepsiCo, Inc.
ROCE	Return on Capital Employed
SAPPE	Sappe Public Company Limited
SD	Standard deviation

**LIST OF ABBREVIATIONS (cont.)**

SEC	Securities and Exchange Commission of Thailand
SET	Stock Exchange of Thailand
SG&A	Selling, General and Administrative Expense
THB	Thai Baht
WACC	Weighted Average Cost of Capital



## CHAPTER I

### INTRODUCTION

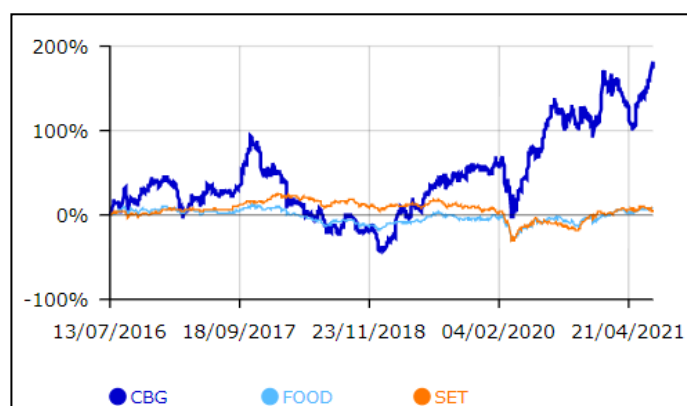
#### **The Investment summary**

Carabao Tawandang Company was focusing on manufacturing and distribution of energy drinks and functional beverages. Carabao Group is the leader with the 2nd largest market share of energy drink companies in Thailand. In 2020, Carabao launched the functional drink WOODY C+ Lock to respond to customer needs who became more health-conscious during the COVID-19 pandemic.

**Table 1.1 CBG's market profile**

Market Profile	
<b>Closing Price</b>	149.5
<b>52-Week Price Range</b>	104-155
<b>Average Daily</b>	1,171.37 Mb.
<b>Share Outstanding</b>	1,000 million shares
<b>Market Cap.</b>	149,500 Mb.
<b>Dividend Yield</b>	1.61%
<b>Forward P/E</b>	43.66
<b>P/BV</b>	14.37
<b>ROE</b>	36.83
<b>EPS</b>	3.53
<b>Dividend per share</b>	1.50
<b>Book value per share</b>	10.4

Source: SET



**Figure 1.1 CBG's return compare to Food industry and SET Index return**

**Source: SET**

## Company Overview

Carabao Group was established in 2001, as a partnership between three founders, one of which is the lead singer of Carabao (legendary Thai folk band). Carabao Energy Drink is CBG's main product, available in amber bottles or aluminum cans. Additionally, the other brand products include bottled water, Coffee, Carabao Sport electrolyte drink.

CBG is Thailand's second-largest energy drink manufacturer, with the flagship Carabao brand having a market share of 21% in 2020. CBG has expanded its energy drink to the international market including CLMV, China, the United Kingdom, and other countries with overseas sales accounting for 47% of total sales in 2020. In Mar 2020, CBG has expanded its product portfolio into the functional drink industry by launching WOODY C+ to respond to health-conscious customers.

## **The Key drivers of CBG's growth**

CBG distributes its products in both domestic and overseas markets. Domestic sales accounted for 49.9% of the Carabao Group's revenue in 2020, while overseas sales accounted for 50.1 % and the majority of energy drink market share is in CLMV, China and the United Kingdom. Therefore, the management was expected to increase the overseas sale by a portion of 52%.

- China's market had strong growth due to a management change/shift in strategy to focus on particular areas and below-the-line marketing operations, exports to China (which accounted for 2% of 2020 sales) increased 218 % YoY in 1Q21. Company expects that China is a fast-growing energy drink market, with a CAGR of 18% from 2014 to 2019.

- Sugar reduction has the potential to reduce costs. CBG's energy drink products contain 13.3% sugar, compared to Osotspa (OSP) of 6.9% for and therefore require a higher sugar tax rate. The management has considered decreasing sugar content to save money on taxes and raw materials.

- Launching the new functional drink including Healthy Shot, Casual Healthy Drink, and Other Essence market. Moreover, more than 77% of functional drinks are sold through modern trade channels, with the remaining 23% distributed through traditional trade channels. In December 2021, Woody C+ Lock was able to steadily grow the industry and become the second largest producer of vitamin C products by December 2020.

## **The Recommendation**

CBG' target price is THB 139.73, according to our DCF valuation. This implies a downside potential of -6.54%, compared to the current stock price of THB 149.5 (July 7<sup>th</sup>, 2021). Therefore, we have issued a "HOLD" recommendation on the slowdown in the economy due to the lockdown policies in many areas., which affects beverage industry sales. However, the main drivers for CBG's positive long-term outlook are the continuous strong demand in the CLMV and China energy drinks market and sales growth from newly launched functional drinks.

**Table 1.2 The Recommendation on CBG Price**

<b>HOLD</b>	
<b>Target price (THB)</b>	<b>139.73</b>
<b>Share price (as of July 7<sup>th</sup> ,2021)</b>	<b>149.5</b>
<b>Downside</b>	<b>-6.54%</b>

**Source: Own Calculation**



## **CHAPTER II**

### **BUSINESS DESCRIPTION**

#### **Carabao Group Business Overview**

Mr. Sathien Setthasit (CEO), he is currently holding 32.1% of CBG's total shares (CBG Annual Report, 2020), Ms. Nutchamai Thanombooncharoen (Managing Director), she is currently holding 22.2% of CBG's total shares (CBG Annual Report, 2020), and Mr. Yuentong Opakul (Senior Deputy Managing Director), he is currently holding 17.2% of CBG's total shares (CBG Annual Report, 2020), together founded Carabao Tawandang Company in August 2001. The business of the firm is to manufacture, sell, market and distribute its beverage products mainly energy drinks under the brand 'Carabao Dang'. The 'Carabao Dang' trademark represents the 'Fighting Spirit' meaning, initiated from the restaurant names 'German Tawandang Brewery Restaurant' with the name of Thai folk band 'Carabao'.

The company was incorporated with the initial capital amount of 1 million baht. It became a limited company on 28 August 2013, then changed itself to be the public company limited on 8 July 2014. The CBG office is located at Silom Road, Bangkok in Thailand.

Carabao Group is the 2<sup>nd</sup> market leader in Thai energy drink industry with 21.4% out of total market share in 2020 (CBG Annual report, 2020). Its branded products consist of energy drinks (non-carbonated and carbonated) in amber glass bottle and aluminum can, drinking water, sport drink, 3-in-1 Instant Coffee in sachet, ready-to-drink coffees in aluminum can and the newest product is vitamin-c shot drink, under 'Woody C+ Lock' trademark. The company also manufactures third-party products consisting of alcoholic drinks and general consumer goods.

CBG manufactures its own main packages i.e., aluminum can by Asia Can Manufacturing Co., Ltd., and amber glass bottle by Asia Pacific Glass Co., Ltd. both are subsidiaries of CBG, 100% ownership. Furthermore, it also has its own bottling



and canning factories and its own distribution centers. CBG conducts its businesses both domestically and internationally.

The Vision of CBG is ‘World Class Brand, World Class Product’ (CBG Annual Report, 2020). CBG’s missions consist of People, Work System, Organization & Management, Technology, Product, Brand, and Corporate Image. People's mission is to develop its people to become better workers with great attitude, high responsibility, eager to learn and apply emerging innovations to their work. The Work System’s mission is to concisely perform tasks in accordance with global working standards. Organization & Management’s mission is to organize and manage its working with suitable organizational structure, providing clear objectives and duties to accomplish each project or work with project-based execution.

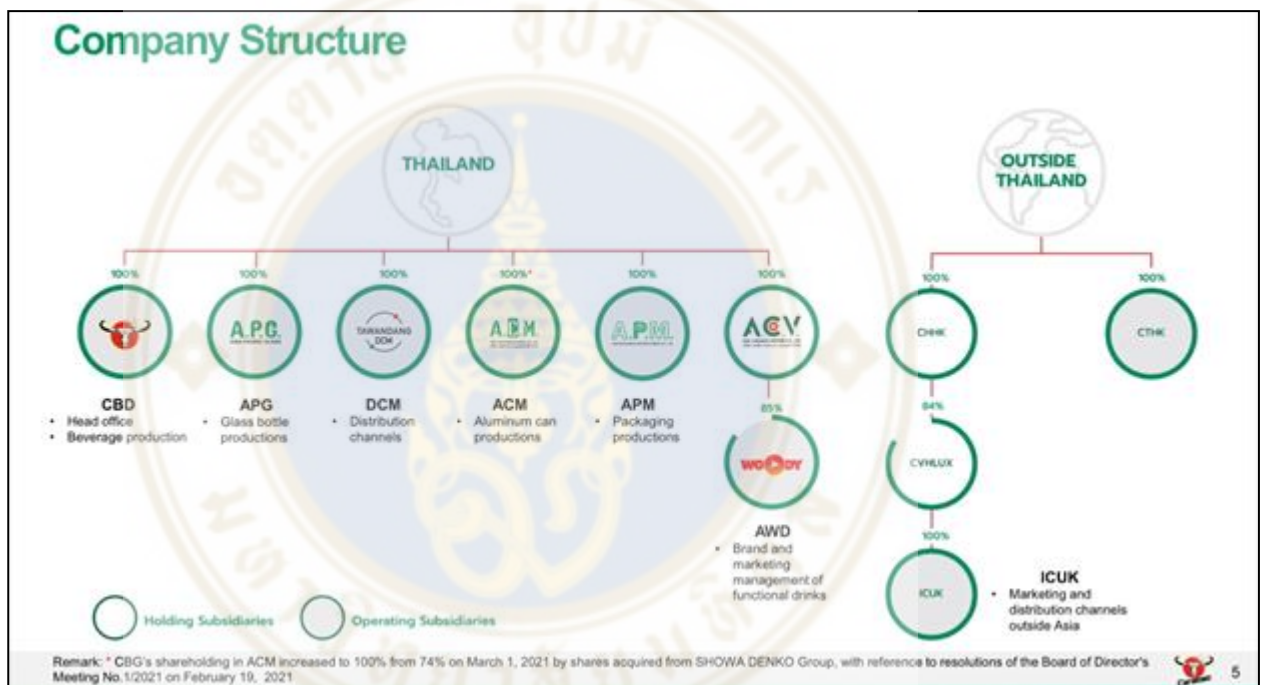
Technology's mission is to develop the production processes, enhance management processes, and also grow the business sustainably by applying cutting-edge technologies or innovations. Product's mission is to serve high-quality products for our customers and make the products to be globally known. The brand's mission is to become a well-known brand. Corporate Image’s mission is to be a company with good corporate governance and also great social awareness.

CBG’s goal is to become the no.1 market leader in Thai energy drink market in 2021. Then, to become the no.1 market leader in ASEAN energy drink industry within 2022. Lastly, to become the no.1 market leader in ASIAN energy drink industry within 2024 (CBG Annual report, 2020).

## **Carabao Group Company Structure**

Carabao Group Company has its subsidiaries both in Thailand and outside Thailand which it mostly owns 100%, except AWD and CVHLUX are holding shares 85% and 64% by CBG respectively. CBD, one of CBG’s subsidiaries, conducts the production, selling, marketing and distributing of beverage products. APG conducts glass bottle production. DCM performs the distribution of its products in Thailand. ACM provides the aluminum can production, which is used as key packaging materials of energy drink in aluminum can format.

APM conducts the production of OPP label, carton box, and shrink film used for packaging stuffs of its energy drinks and other beverage products. AWD is a subsidiary of ACV, under CBG, conducting a functional drinks business, 15% held by Woody, Mr. Vuthithorn Milintachinda. ICUK is being held indirectly by CHHK and CVHLUX, subsidiaries outside Thailand of CBG. ICUK sells, markets, and distributes CBG's products in the UK and outside Asian countries. To update the new registered company under CBG, is Carabao Marketing Group Co., Ltd. (CBMG) engages in data management, has been registered on 16 March 2021. (Figure 2.1)



**Figure 2.1** CBG's company structure

**Source:** CBG's Annual report 2020

## **Carabao Group's Products**

Domestic products consist of non-carbonated energy drink in amber glass bottle, carbonated energy drink in aluminum can, drinking water in PET bottle, Ready-To-Drink coffee in aluminum can, 3-in-1 instant coffee powder in sachet, Sport drink in clear glass bottle, and vitamin-c shot drink under 'Woody C+ Lock' trademark. The main product of CBG which contributes the main revenue to the company in the domestic products category is bottled non-carbonated energy drink under 'Carabao Dang' trademark and also provides higher margin compared with other products. The newest products are Woody C+ Lock, vitamin-c shot drinks. They are in the functional drinks industry, to attract the health-and-beauty concerned consumer group and respond to the rising health-awareness trend of consumers in Thailand.

Export products consist of non-carbonated energy drink in both amber glass bottle and aluminum can format, carbonated energy drink in aluminum can, and plan to launch vitamin-c shot drink. According to the overseas sales in 1Q2021, non-carbonated energy drink in aluminum can took 89% of total overseas sales, and 9% for non-carbonated energy drink in bottle format, and remaining 2% of carbonated energy drink in aluminum can (CBG Analyst Meeting Presentation Quarter 1/2021, 2021). The main source of overseas revenue is mainly from the CLMV countries, 82.1% in 1Q2021 of total overseas sales (CBG Analyst Meeting Presentation Quarter 1/2021, 2021).

Last one is Third-Party Products for Distribution. These products category produces and distributes for other companies. This revenue source began in 2017. Products in this category consist of two types, first one is food-and-beverage category and second one is non-food category. Alcoholic drinks for third-parties took 92% out of the total revenue from this product category in first quarter 2021 (CBG Analyst Meeting Presentation 1Q2021, 2021). (Figure 2.2)

### Product Description

1



Energy drinks in a 150ml bottled format under the brand of Carabao Dang and Carabao

2



Non-carbonated energy drinks in a 250ml canned format under the brand of Carabao

3



Carbonated energy drinks in a 330ml canned format under the brand of Carabao

4



Carbonated energy drinks in a 180ml and 250ml canned format under the brand of Carabao

5



Zinc-contained drinks in a 250ml bottled format under the brand of Carabao Sport

6



Drinking water in PET bottles sized 600 ml and 1,500 ml under the brand of Carabao

7



Carabao instant 3-in-1 coffee powder in 19 g per stick under the brand of Carabao

8



Carabao ready-to-drink coffee in canned 180 ml under the brand of Carabao

9



Vitamin C drinks in a 140ml green bottled format under the brand of Woody C Lock

10



3<sup>rd</sup> party products for distribution  
In addition to the products under the company's trademarks, the company also offer distribution services for 3<sup>rd</sup>-party products including both food and non-food categories.

**Figure 2.2 CBG's products**  
Source: CBG's Annual report 2020



## **CBG's Business Model**

### **CBG's Target Consumers:**

For CBG energy drinks, its target consumers will vary based on regions. In Thailand, the target consumers are basic-to-middle-income, working people who need refreshment and energy during the day. However, in the overseas market, CBG will have to market its products differently based on the target consumer's tastes and needs in different regions.

For CBG sport drink, its target market is mass market. It focuses on Thai consumers who trust in beverage quality under Carabao brand. Carabao Sport, the trademark of CBG, only sells in the Thai market.

For CBG drinking water, its target market is similar to the CBG sport drink that is Carabao Sport. This product focuses on the mass market. Currently, Carabao Drink Water is only available in Thailand.

For CBG coffee products, its target consumers are similar to energy drinks domestic target consumers. Carabao coffee products focus on Thai working people with basic-to-middle income. Both Carabao coffee products i.e., 3-in-1 and RTD are available only in Thai market.

For vitamin-c shot drinks, its target consumers are both in the domestic and overseas market. This product has different target consumers from above mentioned products. The product focuses on middle-to-above-income people who are interested in self-care both beauty and health.

### **CBG's Value Propositions:**

CBG provides its value to customers via its quality products with reasonable pricing. Its products are on par with world class standards. They also serve convenience value to customers with strong distribution systems so consumers can approach its great quality products easily.

### **CBG's Channels:**

CBG's Marketing Channels consist of 3 channels, first one is above-the-line marketing, this marketing channel tries to approach a wide range of consumers or mass consumers. Second one is below-the-line marketing, this marketing tries to approach more specific consumer groups such as Bao Dang Girls Activities. The last one is digital marketing, promoting products via social media channels such as

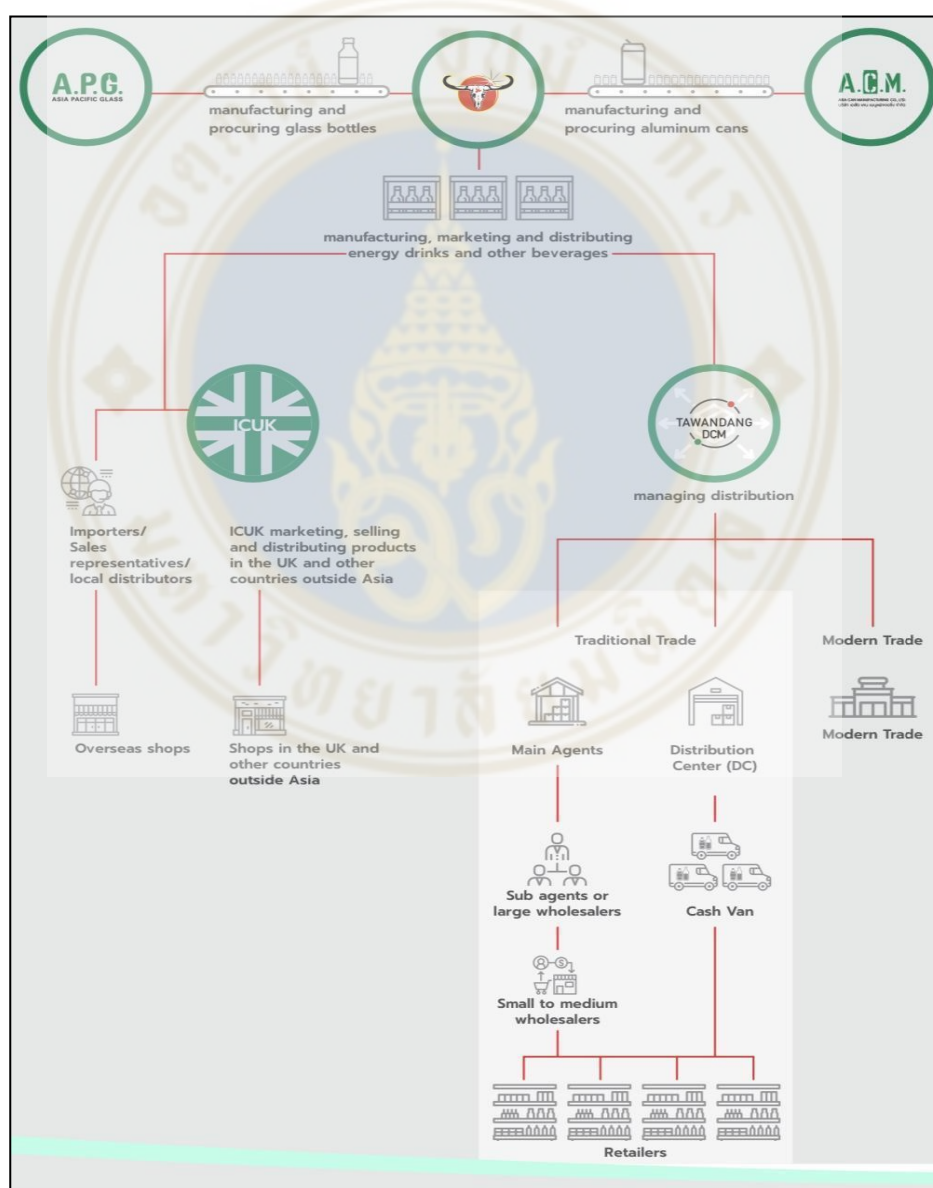
Facebook and Line Official, and so on. CBG also promotes its brand through sponsorship for football clubs i.e., English Football League (EFL) and Chelsea Football Club (CFC). (Figure 2.3)



Figure 2.3 CBG's Marketing Channels

Source: CBG's Annual report 2020

CBG's Distribution Channels are divided into domestic and overseas markets. For the Domestic Market, the firm offers values or its products via traditional trades and modern trades. For traditional trades, it has 31 its own distribution centers covering over Thailand, and has 326 cash vans to distribute its products to traditional retail shops around the nation around 180,000 shops. For modern trade, modern shops such as supermarkets, hypermarkets, convenience shops will directly order the list of CBG's products with the firm and DCM will manage the distribution for them. (Figure 2.4)



**Figure 2.4 CBG's Distribution System**

**Source: CBG's Annual report 2020**



**CBG's Customer Relationships:**

With the strong presence of its own distribution networks, CBG can access the consumer behavior's information via retailers who place orders with the company. This information is useful for creating the result-oriented marketing and sales activities to approach, acquire, satisfy, and retain its customers. The retailers are around 180,000 shops nationwide. CBG conducts marketing and sales activities via offline and online channels for offline such as billboards, television, radios, Bao Dang Girls, and so on. For online options to approach its potential and existing customers with existing and new products, CBG advertises them via Line Official, Facebook, and so on. In the overseas market, the firm has sales representatives to do marketing and sales activities. Specifically for the UK market, CBG strives to increase its brand awareness among UK consumers via doing sponsorship for EFL and CFC.

**CBG's Revenue Streams:**

For CBG, to earn its revenue streams are by selling its assets; those are its beverage products. Its main revenue source is by selling energy drink products both domestic and international markets. Furthermore, the company also earns revenues from selling other beverages under its own brand such as drinking water, sport drink, coffee products, and vitamin-c shot drinks. Lastly, CBG also earns revenue by manufacturing or producing products for other companies' brands, mainly alcoholic drinks and remaining general consumer goods.

**CBG's Key Resources:**

CBG's key resources are mainly fixed assets consisting of aluminum can manufacturing facilities, amber glass bottle manufacturing facilities, beverages manufacturing facilities, canning and bottling manufacturing facilities, packaging materials manufacturing facilities, 31 distribution centers, 326 cash vans. Also, the intangible assets consist of Carabao trademark, human resources, partnership with international suppliers, and Woody C+ Lock trademark, partnership with Thai famous moderator, K. Woody, and so on.

**CBG's Key Activities:**

CBG's key activities consist of manufacturing amber glass bottle, aluminum can, packaging materials, energy drink, sport drink, vitamin-c shot drink, and also canning and bottling drinks. CBG conducts marketing, selling, and distributing its own branded products. It also manufactures, sells, and distributes other companies' branded products including alcoholic drinks and general consumers goods.

**CBG's Key Partnerships:**

CBG's key partners are agents, sub-agents, wholesalers, and retailers, these key partners support the distribution of CBG's value or products to its end consumers with traditional trade. For modern trade, key partners of CBG are supermarkets, hypermarkets, and convenience stores. For the overseas market, CBG's key partners are overseas importers, distributors, sales persons and also grocery stores. For manufacturing of products, the firm needs key partners to provide its raw materials, so the key partners of manufacturing are raw materials and equipment suppliers. CBG did a joint venture with Mr. Vuthithorn Milintachinda to establish AWD company. AWD will invent, market, and sell functional drinks. For drink water and coffee products, the firm outsources local manufacturers to produce its products. For sport drink products, its container is a clear-glass bottle, sourced from local suppliers.

**CBG's Cost Structure:**

CBG's business focuses on its efficiency and utilizes the economies of scale of its fixed assets (property, plant, and equipment), then CBG is more cost-driven than value-driven. CBG's expenses consist of variable costs and fixed costs. Variable costs mainly are raw materials and packaging materials costs which are used for producing its packaging and drinks to become the finished products such as white refined sugar, aluminum coil, glass cullet, and so on, and also utilities costs, wages, and energy costs mainly natural gas for manufacturing. Fixed costs consist of maintenance costs, salaries, marketing & selling expenses, administrative expenses, finance expenses, and taxes.

## CHAPTER III

### THE OVERVIEW ECONOMIC, BEVERAGE INDUSTRY ANALYSIS, COMPETITION ANALYSIS

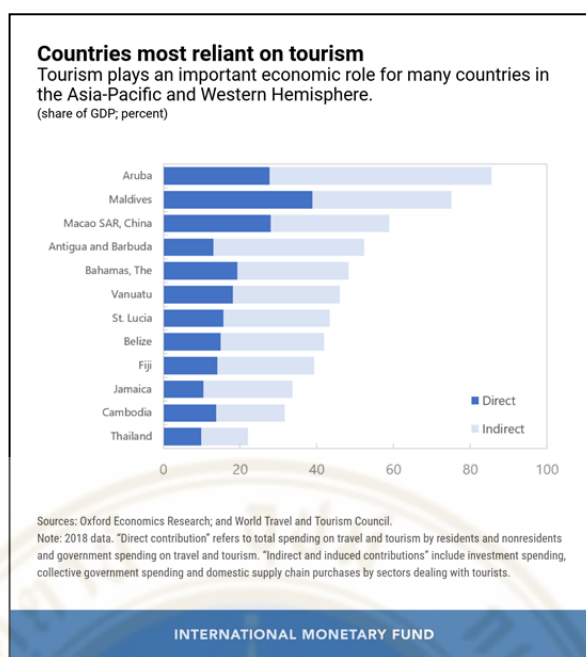
#### The Overview of Thailand and CLMV Countries' Economies

During the Covid-19 epidemic had negative impacts on the global economy and it posed an unprecedented threat to public health, food systems, and the workplace. Tourism is one industry that has been impacted by the Covid-19, Thailand is the most appealing that tourists want to travel. Thai's government issues a policy of travel restriction to limit tourists from high-infected areas. As a result, the number of tourists has decreased and resulted in lower booking rates as well. In addition, the International Monetary Fund (IMF) forecasting 2021 Thailand real GDP growth is 2.6% compared to the projection of world economic outlook at 6%. Moreover, the CLMV countries associations of Cambodia, Laos, Myanmar and Vietnam that Carabao group focuses on (Figure 3.1). Most of CLMV's GDP growths are above Thailand unless Myanmar has a political issue in their own country. In addition to the lockdown policies to prevent the spread of Covid-19, the countries which are most reliant on tourism, around 23% of Thailand GDP, have both direct and indirect impact on the economy. (Figure 3.2)



**Figure 3.1 The GDP comparison of World, Thailand and CLMV**

**Source: IMF**



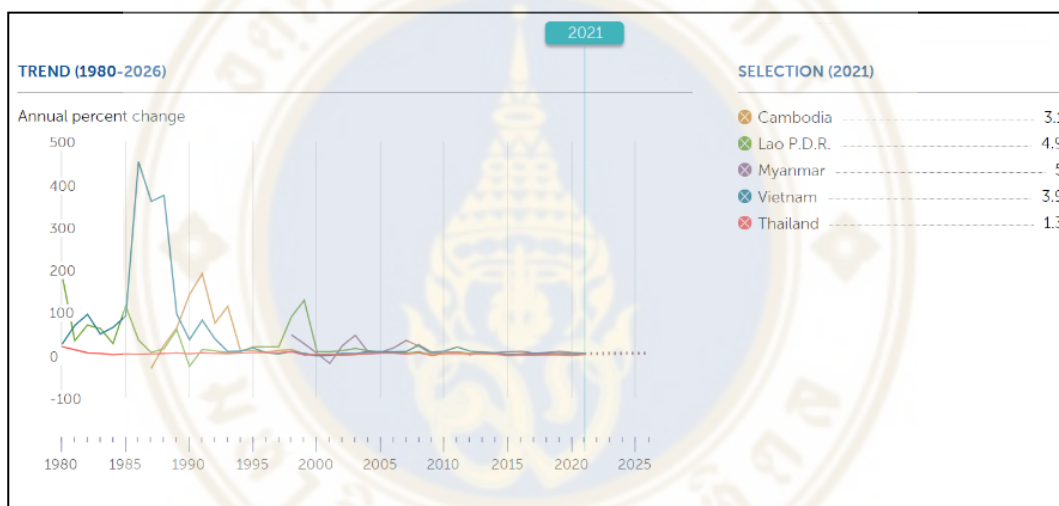
**Figure 3.2 The countries that most reliant on tourism to GDP**

**Source: IMF**

Bangkok contributes nearly half of Thailand's gross domestic (GDP) output. For at least two weeks, retail malls, spas, massage and beauty clinics will be closed. Moreover, the government launched the regulation for most government employees and corporate between private employees to work-from-home. In addition, overnight curfews and domestic travel restrictions imposed by the government also had a negative impact on merchants, airlines, and restaurant operators for over a year. In order to recover from a pandemic, effective vaccines must be widely distributed, and the government must implement monetary policies. The Thai government, on the other hand, implemented short-term monetary policies such as debt postponement, financial support, and so on, which do not help the economy in the long run.

## The Inflation rates

Inflation is the rate at which the price of goods and services in a given economy may be increasing. So, if inflation leads to higher prices for fundamental necessities such as food and services, purchasing power may decline over time. In both 2021 and 2022, the headline inflation from the Bank of Thailand is expected to be 1.29 %, increasing due to supply-side factors. Energy sector inflation increased in line with world crude oil prices. Although the government's temporary electricity tariff reduction measures will help to reduce the pressure to some extent. However, demand-side inflation pressures are at a low level and tend to recover slowly after multiple waves of outbreaks. So, Thailand was the lowest compared to peers CLMV. (Figure3.3)



**Figure 3.3 The inflation rate in Thailand and CLMV compare to the previous year from 1980-2026**

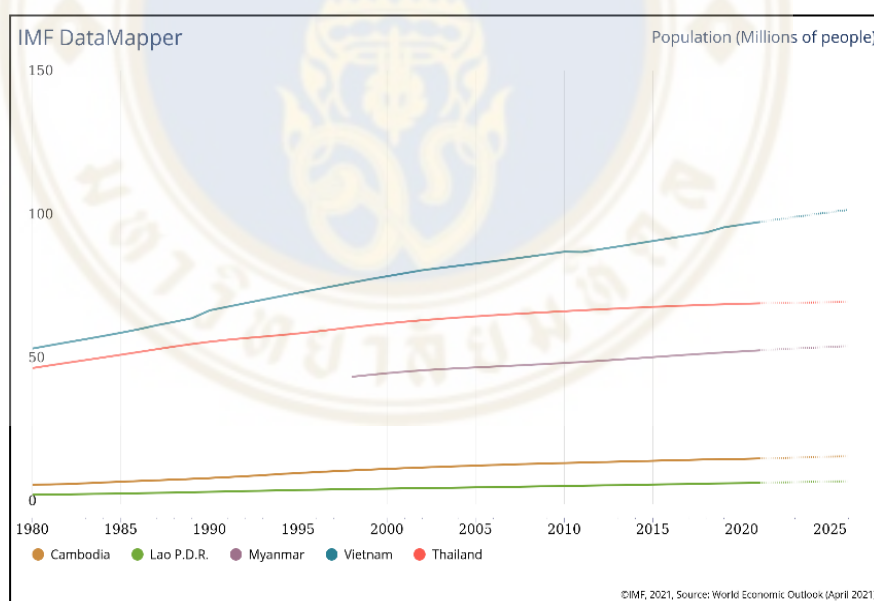
**Source: IMF**



## The Population Trends

Thailand is the 20<sup>th</sup> largest country in the world with over 69 million people. However, the predicted Thailand population may increase 200,000 people and reach 70 million people by the beginning of 2022. While the current median age of the country is 39 years old, the percentage of 60+ may increase from 17.5% in 2020 to 25.2% in 2030. So, the potential may impact the Carabao Group targeted customer. Same as Cambodia, Myanmar and Lao have had constant growth in population. There is a steady increase in the number of populations above the age of 65. (Figure 3.4)

However, Vietnam is going through a significant demographic and social transformation. It has a population of 96.5 million people, which is expected to increase to 120 million by 2050. According to the 2019 Population Census Report, 55.5% of the population are under 35 years old, with a life expectancy of 76 years, which is the highest among similar-income countries in the area. That is the population are entering an aging society

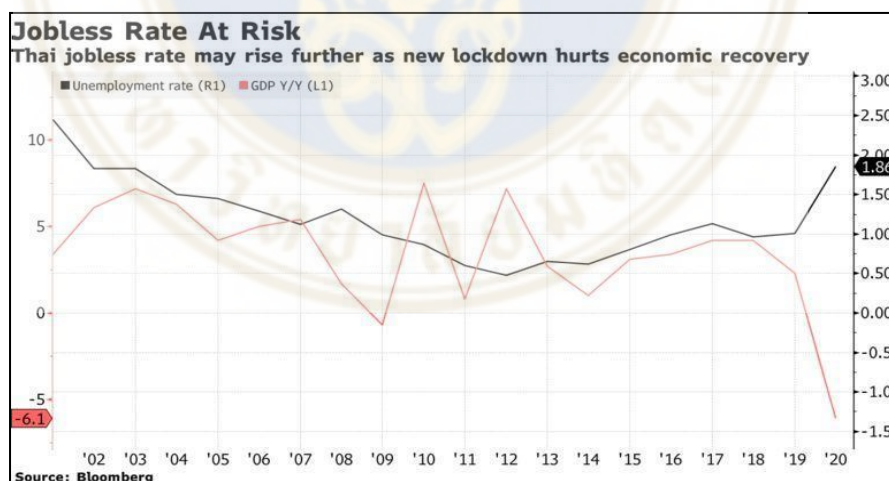


**Figure 3.4 The graph show CLMV and Thailand populations trends**

**Source : IMF**

## Unemployment rate and Thai household debt

The unemployment rate is defined as the percentage of the workforce who is unemployed. The unemployment rate is likely to grow when the economy is weak and jobs are in shortage. On the other hand, when the economy is growing steadily and there are several employment opportunities offered. In 2021, Thailand's unemployment rate is expected to grow from 1.96 % at the end of the first quarter. The highest level since 2009, whereas a prolonged epidemic and business restrictions are likely to result in more people who are losing their employment. Therefore, Thai household debt refers to the debt owed by all Thais' households, including both consumer debt and mortgage loans. According to Bank of Thailand data, Thailand's outstanding household debt increased to 14.13 trillion baht in the first quarter of 2021, or 90.5 % of GDP, increasing from 84.9 % by the end of December 2020. (Figure 3.5) This is the highest level in 18 years. As a consequence of the tighter restrictions, many have lost their incomes., expenses may increase much more. These will have a significant effect on consumer spending, which is a fundamental driver of economic growth.



**Figure 3.5 The graph show unemployment rate in Thailand may increase further as new lockdown hurts economic recovery**

Source: <https://www.bloomberg.com/news/articles/2021-07-11/thailand-s-lockdown-like-virus-curbs-dent-economic-recovery-bets>



## Beverage Industry Analysis

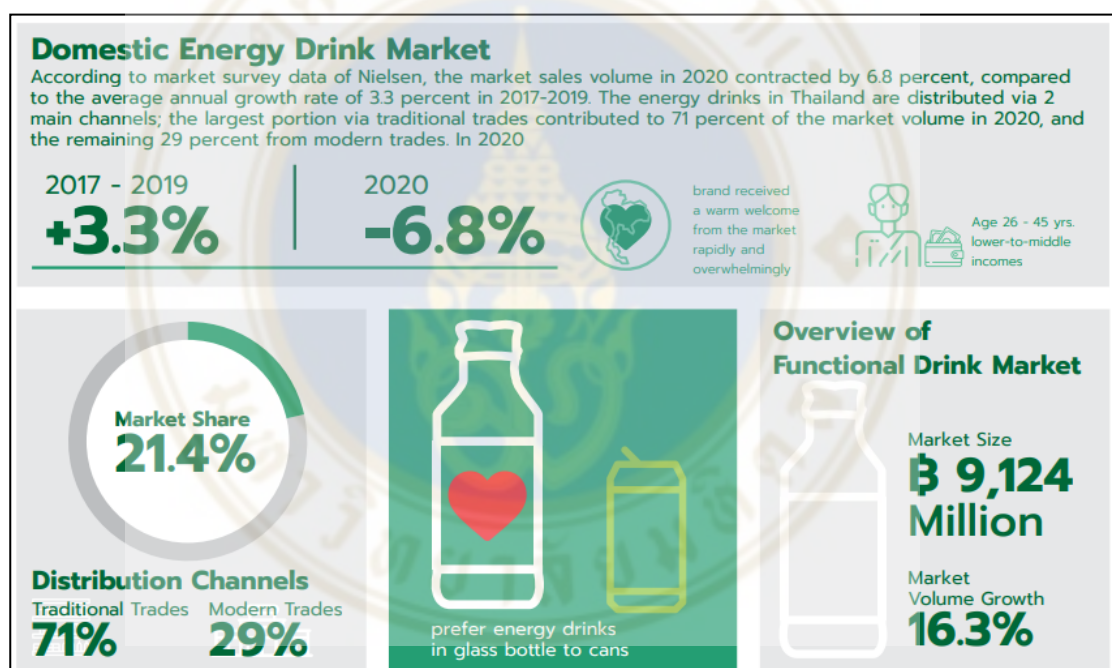
CBG's trademarks produce revenue in the Agribusiness and Food and Beverage industries, including energy drinks, sport drinks, drinking water, and ready-to-drink coffee. According to Nielsen market survey data, the energy drink market sales contracted by 6.8% in 2020, compared to a 3.3% average annual growth rate from 2017 to 2019. Although energy drinks are primarily targeted at people aged 26 to 45 who have a lower-to-middle income, they prefer non-carbonated energy drinks and are consumed sweeter than other countries. According to the report, Thai consumers prefer energy drinks in glass bottles to those in cans. CBG is a leading brand in Thailand, with the second highest market share. Obviously, Thai companies that understand Thai customer characteristics dominate the major competitive landscape of Thailand's energy drink sector. (Figure 3.6)



**Figure 3.6 The data of international energy drink market**

**Source: CBG's Annual report 2020**

Energy drinks are a premium product on the international market when compared to other soft drink products. The United States, China, Japan, the United Kingdom, and Brazil are the top five energy drink markets in the world. (Figure 3.6) China is the most attractive market to enter due to the extremely strong growth rate of the local brand energy drink sector and the large population expansion size. According to Nielsen market survey data, Thailand's functional drinks market size is 9,124 million, with a strong growth rate of 9%. There are different categories of functional drinks: Healthy Shot, Casual Healthy Drink, and Other Essence. CBG is mainly distributed through modern trade (77%) and traditional trade (23%) respectively. (Figure 3.7)

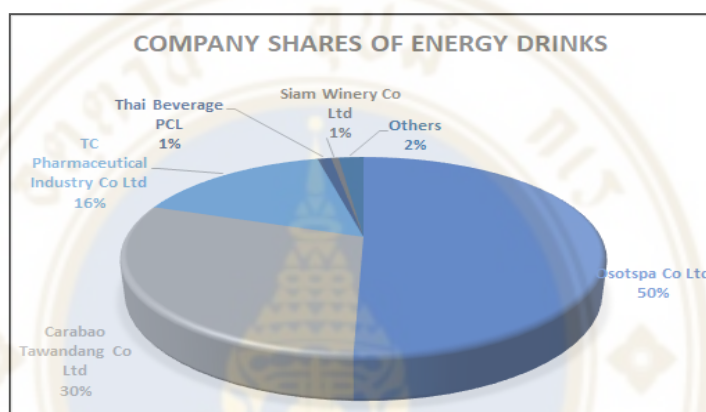


**Figure 3.7** The data of domestic energy drink and functional drink market

Source: CBG's Annual Report 2020

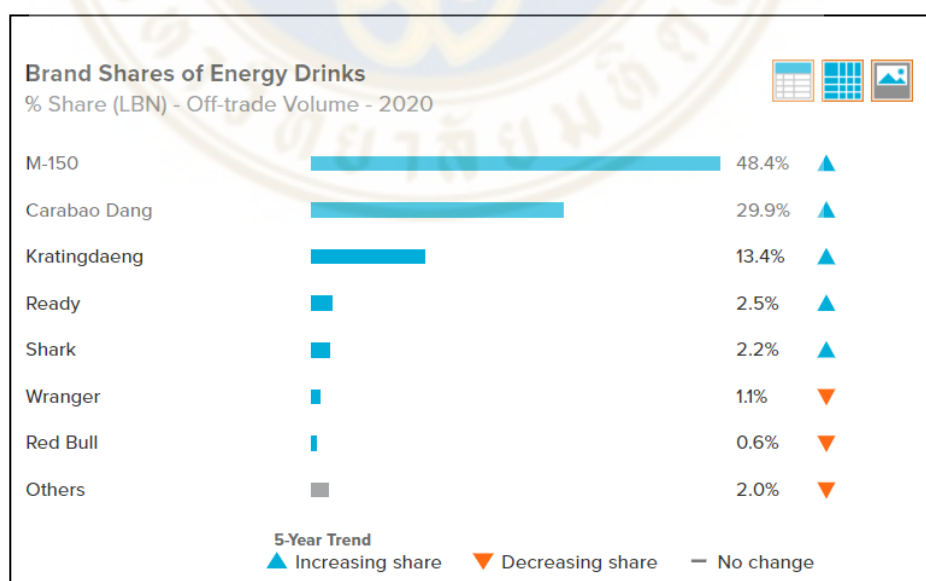


Osotspa is the strong competitor with 50% of market share in Thai Energy Drinks market (Figure 3.9). M-150, Shark and Lipo are operated under Osotspa brand. However, the sales of functional drinks increased 46.6% with the no.1 market share (28%) mainly by its vitamin-c shot drink under C-Vitt brand (Figure 3.10). Consumers are becoming more health-conscious and starving for time from COVID-19 pandemic. Therefore, they look for some alternative beverages for more effective and convenient ways to protect their health and immunity.



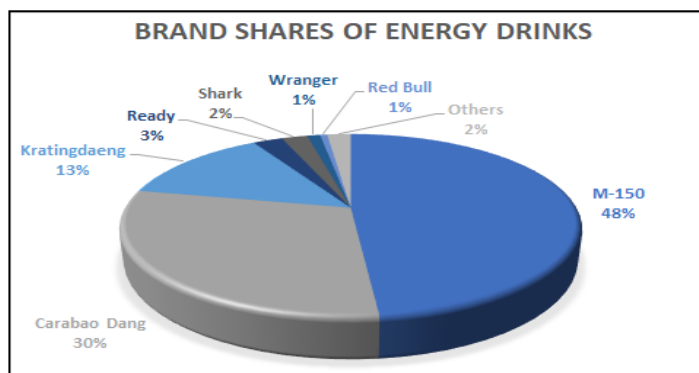
**Figure 3.9** The chart show market share of energy drink in Thailand

Source: Euromonitor



**Figure 3.10** The Chart show brand share of energy drink in Thailand

Source: Euromonitor

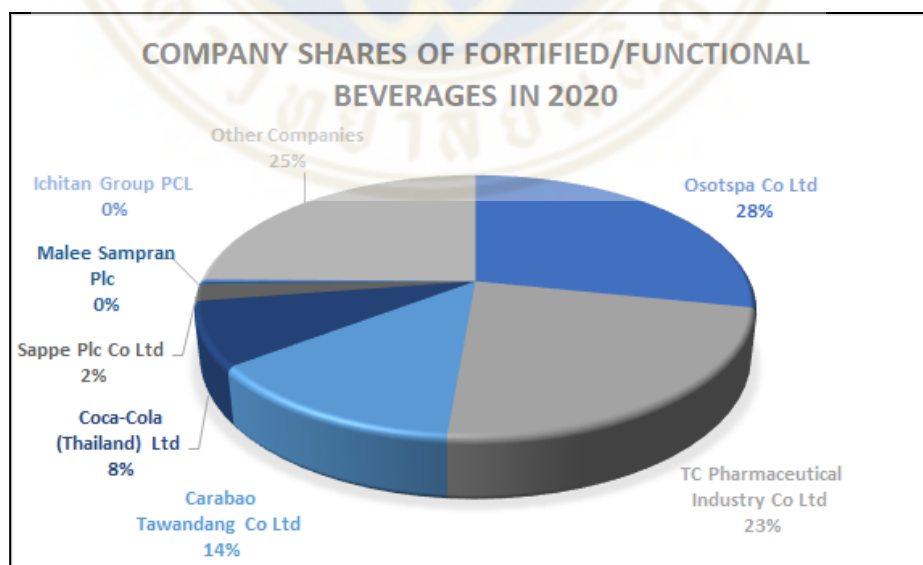


**Figure 3.11** The chart show brand share of functional beverages in Thailand

Source: Euromonitor

### Indirect competitor within the functional drink market

As a trend, consumers are becoming more health-conscious and starving for time from COVID-19 pandemic. So, they find some alternative beverages for more effective and convenient ways to protect their health and immunity. A Functional beverage is an interesting way to boost the nutritional content of their diets such as plant-based, mal-based, and juice leading. Moreover, the companies are continuing to have more product innovation by adding vitamins and minerals to their formulations. Therefore, Carabao Group should compare among other indirect competitors in the same beverage industry. (Figure 3.12)



**Figure 3.12** The chart show market share of functional beverages in Thailand

Source: Euromonitor



- **Sappe Public Company Limited (SAPPE)**

Sappe manufactures, markets, sells and distributes its healthy beverage and snack products consist of 5 categories i.e., function drinks, juice drinks, functional power products, RTD products, and healthy snacks in both domestic and overseas markets (more than 90 countries). The company's revenue sources are from 45:55 proportion of domestic and overseas sales. Sappe distributes its products domestically via 4 channels: modern trades, traditional trades, E-commerce channels, and the last one Out-Of-Home (OOH) channels. The sales from overseas took around 55% of total sales revenue in 2020, 38% from Asian countries, 12% from American and European countries, 7% from Middle East countries and others. Sappe distributes its products internationally via importers, subsidiaries, and local distributors in each county. Sappe currently is both the direct and indirect competitor of CBG in the functional drinks segment, due to having similar and different products but targeting similar target consumers. (Figure 3.13)



**Figure 3.13 The Products under SAPPE**

**Source: Sappe website**

- **Monster Beverage Corporation (MNST)**

Monster Beverage Corporation mainly markets and sells energy drinks under its several brands mainly Monster Energy covering 141 countries but mainly in the U.S.A. In 2015, the company acquired energy drink brands under the Coca-Cola company and is sold in 72 countries. Reign Total Body, its high-performance energy drink brand, sells in 15 countries. It also has an affordable energy drink brand that sells in 28 countries. And other energy drink brands sell in 154 countries. The company just mainly invents and markets its beverage formulas and brands, it has no manufacturing facilities, and any distribution centers. All of its branded products are manufactured, bottled, canned, distributed by third parties domestically and internationally. MNST is the secondary competitor, due to its products being similar, however different pricings, as a result, different target consumers. (Figure 3.14)



**Figure 3.14** The Product under Monster Energy Drinks

**Source:** Monster Energy Corporation website

- **The Coca-Cola Company (KO)**

The Coca-Cola Company manufactures, sells, and markets its products covering more than 200 countries with 5 product categories: Coca-Cola branded products, Sparking Flavors beverages, Nutrition, Juice, Dairy & Plant, Hydration, Sports, Tea & Coffee products, and others. The company strives to reduce its sugar adding in its products to show more health care to its consumers. The firm tries to launch more and more products relating to healthier and nourishing beverages. The company does not only manufacture by itself, but also has its bottling and manufacturing partners around the world. The Coca-Cola Company is the indirect competitor of CBG, due to its products being possible substitutes of CBG's products for its target consumers. (Figure 3.15)



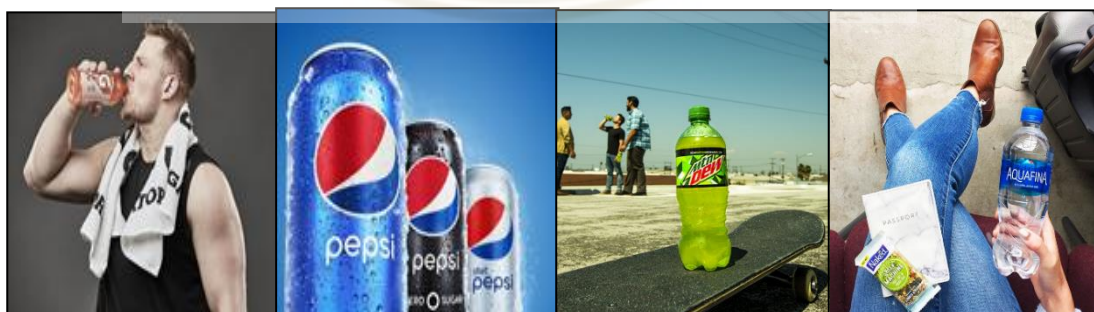


**Figure 3.15 The Products under The Coca-Cola Company**

**Source:** The Coca-Cola Company website

- **PepsiCo, Inc. (PEP)**

PepsiCo makes, markets, sells, and distributes its food and beverage products covering more than 200 countries. Its brands under the firm consist of Pepsi-Cola, Tropicana, Gatorade, Frito-Lay, and Quaker. In 2020, 55% of total revenue is from food products sales, and the remaining 45% is from its beverage products. Its revenue sources are mainly from the U.S.A. (58%) and the remaining (48%) are from other countries around the world. PepsiCo is the direct and indirect competitor of CBG, due to having both similar products to CBG such as Aquafina Drink Water and Gatorade electrolyte drink, and also different products however can target the same consumer groups such as Pepsi soft drinks, and Lipton RTD tea. (Figure 3.16)



**Figure 3.16 The Products under PepsiCo**

**Source:** PepsiCo website

## **CHAPTER IV**

### **THE VALUATION**

#### **The Forecast of Domestic sales**

CBG operates as a holding company, with a variety of subsidiaries held directly and indirectly through the shareholding. Therefore, the revenue of CBG can categorize into 4 group based on product:

- Branded products by own manufacture
- Branded products by 3<sup>rd</sup> party's manufacture
- 3<sup>rd</sup> party's products for distribution
- The others

In 2016, the total sales of CBG were THB 9,965 million, increasing 28.5% from 2015, when divided into the proportion of domestic and overseas sales, which was 66:34. Domestic sales increased by 20.6%, while export sales grew by 47.7%. As a result of the continued expansion in sales of existing products such as the Carabao Dang and Star Plus.

However, the total domestic revenue was 7,764 million dropped -2.07% in 2019 from energy drinks but also increased from 3<sup>rd</sup> party's products for distribution THB 1,409 million. Due to increased sales of branded products by own manufacture and sales of third-party products for distribution, total revenue from sales in 2020 totaled THB 17,231 million, rise THB 2,298 million or 15.4% from the previous year, due to high demand for energy drinks in export markets and sales of Woody C+ Lock, the new vitamin c drink launched in March 2020.

According to the sale of energy drinks and functional drinks were forecasting in 2021-2025 by using CAGR from Euromonitor's estimation. As a result, customers concerned about their health during the outbreak may purchase the functional drink like Woody C+ Lock to boost their immunity. However, the general product and the branded products by 3<sup>rd</sup> party's manufacture such as Carabao drinking water and Carabao coffee, due to the domestic consumption and economic recession

caused by the spread out of Covid19, we do not expect that these products will grow significantly in 2021. As a consequence, we calculate the sale of each product by using the constant number. (Table 4.1)

**Table 4.1 The domestic forecasted by Market growth and CAGR**

Domestic Sales Forecast - CBG Unit: Million Baht	2015	2016	2017	2018	2019	2020	CAGR (15-20)	no. to calculate	2021F	2022F	2023F	2024F	2025F
<b>Domestic sales</b>	5,477	6,603	7,822	7,928	7,764	9,133	8.45%	10.01%	<b>8,982</b>	<b>10,022</b>	<b>10,963</b>	<b>11,921</b>	<b>13,153</b>
growth rate		20.56%	18.46%	1.36%	-2.07%	17.63%			-1.66%	11.59%	9.38%	8.74%	10.34%
<b>Approach#1 Market growth and CAGR</b>													
Total domestic sales revenue	5,477	6,603	7,822	7,928	7,764	9,133			<b>9,884</b>	<b>10,957</b>	<b>12,161</b>	<b>13,451</b>	<b>15,251</b>
growth rate		20.56%	18.46%	1.36%	-2.07%	17.63%			8.23%	10.85%	10.99%	10.61%	13.38%
Branded Products by Own Manufacture	5,475	6,163	6,083	6,098	5,823	5,985			6,184	6,414	6,677	6,993	7,339
Energy drinks	5,379	6,015	6,034	6,083	5,823	5,733	1.28%	1.80%	5,836	5,941	6,048	6,157	6,268
Sports drink	97	148	49	15	N/A	0.6			0.5	0.5	0.5	0.5	0.5
Vitamin C drinks						251		38%	347	472	628	836	1,070
Branded Products by Third-Party Manufacture	0	238	936	811	532	443			370	470	470	470	470
Carabao drinking water		102	96	71	64	71	-8.7%		70	70	70	70	70
Carabao 3-in-1 coffee		56	123	95		372			300	400	400	400	400
Carabao RTD coffee		80	718	645									
Third-Party Products for Distribution	2	197	803	1,020	1,409	2,413	313.34%		3,033	3,770	4,705	5,673	7,121
Third party products to total domestic sales	0.04%	2.98%	10.27%	12.87%	18.15%	26.42%			30.69%	34.41%	38.69%	42.17%	46.70%
growth rate		8070.29%	244.09%	29.33%	41.06%	45.59%			16.14%	12.13%	12.46%	9.00%	10.72%
Third party products to total sales	0.03%	1.98%	6.22%	7.05%	9.44%	14.00%			17.03%	18.96%	21.22%	23.22%	26.07%
growth rate		7563.24%	214.78%	13.34%	33.79%	48.42%			21.63%	11.28%	11.94%	9.43%	12.29%
General consumers' products		N/A	529	420	248	260	-21.08%		300	300	300	300	300
Alcohol beverages			274	599	1,161	2,153	98.81%	27%	2,733	3,470	4,405	5,373	6,821
Others	6	0	0	0	0	292		1.90%	298	303	309	315	321

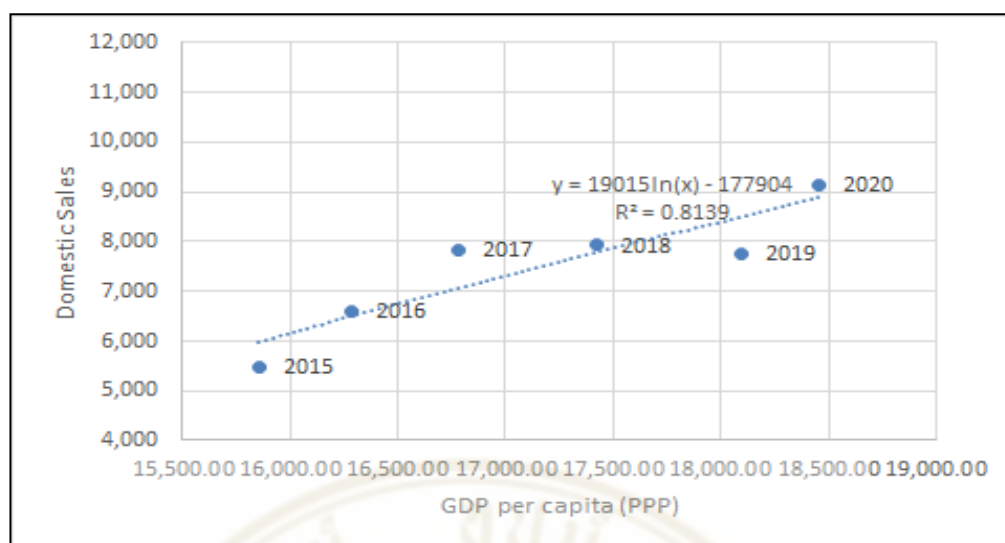
Source: Own calculation

Furthermore, another domestic sale forecasted by using GDP per capita from IMF, also using logarithmic trendline relationship. The result of the logarithmic trendline equation is  $Y = 19,015 * \ln(X) + 177,904$ . (Figure 4.1) After that, substitute x with GDP per capita from IMF forecasted. However, the domestic sales were calculated by averaging the result from Approach 1 and 2. (Table 4.2)

**Table 4.2 The domestic forecasted by GDP per capita**

Domestic Sales Forecast - CBG Unit: Million Baht	2015	2016	2017	2018	2019	2020	CAGR (15-20)	no. to calculate	2021F	2022F	2023F	2024F	2025F
<b>Domestic sales</b>	5,477	6,603	7,822	7,928	7,764	9,133	8.45%	10.01%	<b>8,982</b>	<b>10,022</b>	<b>10,963</b>	<b>11,921</b>	<b>13,153</b>
growth rate		20.56%	18.46%	1.36%	-2.07%	17.63%			-1.66%	11.59%	9.38%	8.74%	10.34%
<b>Approach#2 GDP per capita</b>													
GDP per capita (Purchasing Power Parity)	15,854.13	16,285.39	16,782.10	17,422.95	18,095.74	18,453.47			17,691.84	18,655.67	19,331.76	19,978.98	20,689.48
growth rate		2.72%	3.05%	3.82%	3.86%	1.98%			-4.13%	5.45%	3.62%	3.35%	3.56%
Total domestic sales revenue	5,477	6,603	7,822	7,928	7,764	9,133			<b>8,079</b>	<b>9,088</b>	<b>9,765</b>	<b>10,391</b>	<b>11,055</b>
growth rate		20.56%	18.46%	1.36%	-2.07%	17.63%			-11.54%	12.49%	7.45%	6.41%	6.39%

Source: Own calculation



**Figure 4.1 The Logarithmic Trendline**

**Source: Own Calculation**

### The Forecast of Oversea sales

In 2020, the Carabao Group generated revenue from domestic sales of 49.9% and overseas sales of 50.1%. CLMV accounts for the majority of overseas sales, with Myanmar contributing to 16.5 percent of total sales, or THB 974 million baht. However, political discord between the military and protesters in Myanmar turned to violence in February 2021, resulting in a decline in Myanmar sales and an effect on Myanmar GDP growth forecasted by the IMF to be -8.9% in 2021. Furthermore, after the floods, heavy rainfall throughout the country in 4Q2020, sales in Cambodia may rise up. While the proportion of sales from China may increase from more distributors' sales and brand awareness. So, the revenues in China may grow at a constant 5%.

The method that we already use to forecast CBG's export sales for the next 5 years growth by calculating the industry growth from the export of water, incl. mineral waters and aerated waters of CLMV aggregate (Including Cambodia, Vietnam, Myanmar and Lao People's Democratic Republic) from Trade Map growth by use Compound Annual Growth Rate (CAGR) between 2017-2020 is 8.72% to estimate for the next 4Y oversea sale between 2021 to 2025. (Table 4.3) and (Table 4.4)



**Table 4.3 The product in categories of water incl. mineral waters and aerated waters, containing added sugar or other sweetening exports from Thailand.**

Country (Millions THB)	2017	2018	2019	2020	CAGR (2017-2020)
World	37,470	45,662	49,998	50,201	10.24%
Cambodia	8,655	12,568	15,104	14,107	17.69%
Vietnam	11,935	13,625	13,815	12,098	0.45%
Myanmar	5,648	6,256	7,135	7,381	9.33%
Lao People's Democratic Republic	2,051	2,249	2,533	2,770	10.54%
CLMV Aggregate	28,289	34,698	38,588	36,356	8.72%
CBG exports to CLMV / Thailand Exports to CLMV	11.64%	15.85%	15.29%	18.91%	

**Source: Trademap and Own Calculation**

**Table 4.4 The estimated oversea sales for the years 2021-2025.**

Approach# Market growth and CAGR	2015	2016	2017	2018	2019	2020	LAST 3Y CAGR (2017-2020)	2021F	2022F	2023F	2024F	2025F	NEXT 4Y CAGR (2021-2025)
<b>TOTAL EXPORTS SALES (BTMN)</b>	2,276	3,356	5,023	6,474	7,058	8,098	17.26%	8825	9866	11213	12511	14161	12.34%
- % YoY Growth		47.45%	49.67%	28.89%	9.02%	14.74%		8.98%	11.80%	13.66%	11.57%	13.18%	
CLMV Sales	1,878	2,546	3,293	5,498	5,901	6,875	27.81%	7,425	8,316	9,563	10,711	12,211	12.17%
- % YoY Growth		35.57%	29.34%	66.96%	7.33%	16.51%		8%	12%	15%	12%	14%	8.72%
CHINA	-		1,019	590	494	385	-27.71%	700	850	950	1100	1,250	
Other Countries	398	810	711	386	663	838	5.63%	700	700	700	700	700	
CLMV / International Business		75.86%	65.56%	84.92%	83.61%	84.90%		84.14%	84.29%	85.29%	85.61%	86.23%	

**Source: Own Calculation**

## Discounted Cash Flow (DCF)

Discounted Cash Flow (DCF) is a valuation method that determines the value of a company by forecasting the future cash flow and discounting it back to the present value, known as the Net Present Value (NPV).

### Cash Flow Forecast

Cashflow forecasting to estimate cash inflow and expense to managing liquidity, as shown in the below table:

**Table 4.5 The Terminal Value and Discounted Cash Flow**

Carabao Group (CBG) THB: Million	2020 0	2021F 1	2022F 2	2023F 3	2024F 4	2025F 5	Terminal Value
EBIT	4,333	4,076	4,422	4,763	5,301	5,872	
Less: Taxes on EBIT	209	278	261	368	564	667	
NOPAT (Net Operating profit after taxes)	4,124	3,798	4,161	4,395	4,737	5,204	
Add: Depreciation	668	608	620	632	645	658	
Add/Minus: Change in Net working capit	652	-605	86	94	93	118	
Add:/Minus: Capital Expenditure	-1,655	-1000	-1000	-1500	-1500	-1500	
Free cash flow to firm	2,486	4,011	3,695	3,433	3,789	4,243	
Discounted Cash Flow	2,486	3,841	3,389	3,015	3,187	3,419	124,995.15
Summary of cash flow		3,841	3,389	3,015	3,187	128,414	

**Source: Own Calculation**

$$\text{Cashflow to the Firm} = \text{NOPAT} + \text{Depreciation} + \text{Working Capital Change} - \text{CAPEX}$$

### The Terminal Growth

According to the forecasted growth rate from the proportion of domestic and overseas markets, CLMV beverage industry is the majority based on the forecasted growth which imports from Thailand. Therefore, we consider that the overseas sale is over optimistic for our long-term growth. So, we discount the overseas sales by 20% to 6.98%.



**Table 4.6 The terminal growth rate**

<b>Growth</b>	<b>LT Growth</b>	<b>PROP.</b>
Total	4.42%	
Domestic Sales	1.80%	49%
Oversea Sales	6.98%	51%

**Source: Own Calculation**

Assuming long-term growth from the proportion of overseas outlook tends to increase from China and Cambodia. Therefore, when compared to the country's real GDP forecasted in CLMV, the difference is between 5 and 6 %. However, the recovery of economies under uncertain political conditions may also have a negative impact on Thailand's GDP prediction.

**Table 4.7 The Real GDP forecast from IMF**

<b>The Real GDP Forecast</b>	<b>2022F</b>	<b>2023F</b>	<b>2024F</b>	<b>2025F</b>	<b>CAGR (2022-2025)</b>
<b>World</b>	4.4	3.5	3.4	3.3	-9.14%
<b>Cambodia</b>	6	6.3	6.6	6.7	3.75%
<b>Lao</b>	5.6	5.8	5.8	6.1	2.89%
<b>Myanmar</b>	1.4	4.7	5	5	52.86%
<b>Viet Nam</b>	7.2	6.9	6.8	6.6	-2.86%
<b>China</b>	5.6	5.4	5.3	5.1	-3.07%
<b>Thailand</b>	5.6	3.8	3.5	3.6	-13.69%

**Source: IMF**

### WACC Calculation

The Weighted Average Cost of Capital (WACC) is the estimate of a firm's cost of capital by weighting the proportion of each type of capital including common stock, preferred stock, bonds, and any other long-term debt. The calculation of WACC is 7.96%. (Table 4.8)

$$WACC = \left(\frac{E}{V} \times Re\right) + \left(\frac{D}{V} \times Rd \times (1 - Tc)\right)$$

#### Where:

E = Market value of the firm's equity

D = Market value of the firm's debt

V = E+D

Re = Cost of equity

Rd = Cost of debt

Tc = Corporate tax rate

**Table 4.8 Calculation table of WACC**

WACC	
EQUITY VALUE (BtMn)	149,500
NET DEBT (BtMn)	2,116
NET DEBT/ (EQUITY + NET DEBT)	<b>1.40%</b>
RISK FREE RATE	1.72%
EQUITY RISK PREMIUM	7.82%
BETA	0.81
<b>COST OF EQUITY</b>	<b>8.05%</b>
<b>COST OF DEBT</b>	<b>2.30%</b>
AFTER TAX COST OF DEBT	1.84%
TAX	20.00%
<b>WACC</b>	<b>7.96%</b>

**Source: Own Calculation**

**Table 4.9 The current share price as of July 7<sup>th</sup> ,2021**

<b>Share price</b>	149.5
<b># Shares (Mn)</b>	1,000
<b>Equity Value (BtMn)</b>	149,500
<b>Net Debt (BtMn)</b>	2,116
<b>NET DEBT / (EQUITY + NET DEBT)</b>	1.40%

**Source: Own Calculation**

### **Cost of equity ( $R_e$ )**

The cost of equity ( $R_e$ ) is the rate of return that shareholders expect to receive on their investment in CBG company. CBG's cost of equity was using the Capital Asset Pricing Model (CAPM) method that measured the relationship between systematic risk and expected return for assets.

$$\text{Required Return on Equity} = \text{Risk free rate} + (\text{Beta} * \text{Equity Risk Premium})$$

Due to the Risk-free rate, the 10-year treasury rate from ThaiBMA is 1.72%. The equity risk premium is 7.82% from Damodaran. CBG was one of the SET50 Index's largest market capitalizations. CBG was considered to have a lower risk than SET Index. So, SET Smart's beta was 0.81. The required return on equity as follow:

$$\begin{aligned} \text{Require Return on Equity} &= 1.72\% + (0.81 * 7.82\%) \\ &= 8.05\% \end{aligned}$$

### Cost of debt ( $R_d$ )

The cost of debt ( $R_d$ ) is the effective interest rate, which shows that CBG's interest expense decreased from THB 133 million to THB 107 million from the end of 2019 to the end of 2020. From 2016 to 2020, the effective interest rate is between 2 to 2.9 %. Furthermore, I calculated the cost of debt using a 2.3 percent assumption based on the historical effective interest rate.

### Corporate Tax rate

The corporation tax expense was 667 million baht or 18.3 % revenue in 2020, assuming 20% increase from 2020. Due to the higher income tax expense, CBG was able to operate better operational performance while incurring less loss from overseas subsidiaries. Furthermore, the amount had included the benefit of the proposed tax exemption from investment, resulting in a savings of THB 48 million for the five years from 2020 to 2024.

### DCF Valuation Results

The company's present value was calculated by Discount Cash Flow (DCF), which equals THB 141,846 million and divided by the number of shares. So, I estimated that the share price should be THB 139.73, the downside -6.54 % from the current share price of THB 149.5 on July 7th, 2021. (Table 4.10)

**Table 4.10 The Result of DCF Valuation**

PV of firm value (THB mn)	141,846
Value of Net Debt (THB mn)	2,116
Value of equity (THB mn)	139,730
No.of shares (mn)	1,000
Estimated Share Price (THB)	<b>139.73</b>

**Source: Own Calculation**

## The Sensitivity Analysis

From DCF valuation analysis Sensitivity analysis was conducted for the terminal growth rate and the WACC. Sensitivity Analysis is a financial modeling tool that evaluates how the values of CBG's estimated prices affect WACC and growth under various scenarios.

**Table 4.11 Sensitivity Analysis**

	WACC											
	139.73	4.96%	5.96%	6.96%	7.96%	8.96%	9.96%	10.96%	11.96%	12.96%	13.96%	14.96%
Terminal Growth Rate	3.00%	237.39	162.25	125.02	102.81	88.03	77.51	69.62	63.50	58.60	54.60	51.27
	3.50%	314.94	193.05	141.56	113.15	95.13	82.69	73.59	66.63	61.15	56.71	53.05
	4.00%	473.01	239.55	163.68	126.10	103.66	88.74	78.12	70.16	63.97	59.03	54.99
	4.42%	827.63	301.51	188.83	139.73	112.22	94.64	82.43	73.46	66.59	61.16	56.75
	5.00%	N/A	477.42	241.72	165.12	127.17	104.51	89.46	78.73	70.69	64.45	59.46
	5.50%	N/A	981.66	320.74	196.51	144.01	115.05	96.68	84.00	74.72	67.63	62.04
	6.00%	N/A	N/A	481.83	243.90	166.54	128.24	105.37	90.17	79.33	71.22	64.92
	6.50%	N/A	N/A	990.83	323.68	198.22	145.24	116.00	97.46	84.66	75.29	68.14
	7.00%	N/A	N/A	N/A	486.32	246.04	167.98	129.31	106.22	90.88	79.94	71.75
	7.50%	N/A	N/A	N/A	1000.38	326.54	199.95	146.46	116.95	98.24	85.32	75.86
	8.00%	N/A	N/A	N/A	N/A	490.64	248.20	169.41	130.38	107.08	91.59	80.55

**Source: Own Calculation**

Based on the sensitivity analysis, the expected share price of CBG is THB 149.5. In terms of WACC sensitivity, we were adjusted with 1% step change in WACC and the terminal growth rate. Therefore, the WACC ranges from 4.96 - 14.96%. Meanwhile, we assume constant terminal growth at 4.42% from the overseas forecasted.

While the WACC was increasing, the CBG's stock price was decreasing. On the other hand, if the company has a higher required return on equity or a lower cost of debt. So, if the terminal growth increases, the price may increase as well. As a result, we remain certain that my estimate at THB 139.73 is reasonable.

## Rating Criteria

According to the recommended targeted price, we use the criteria to rating the recommendation into three categories

- We include a BUY recommendation if the stock's value is up more than 10% from the current price.
- If the stock's value is expected to increase between -10% to 10%, we will provide a HOLD recommendation.
- If the stock's value is lower than 10% the present price, we issue a SELL recommendation.

**Table 4.12 Rating Criteria**

<b>BUY</b>	More than 10% Upside
<b>HOLD</b>	Less than 10% Upside and greater than 10% Downside
<b>SELL</b>	Lower than 10% Downside



## CHAPTER V

### INVESTMENT RISKS & DOWNSIDE POSSIBILITIES

An investment risk and downside possibilities were using the risk assessment matrix to estimating the negative impact and possibility to business risk as follow:

**Table 5.1 Risk Matrix**

Risk Assessment Matrix				
		SCALE OF SEVERITY		
		ACCEPTABLE	TOLERABLE	GENERALLY UNACCEPTABLE
SCALE OF LIKELIHOOD	NOT LIKELY		Market Risks	
	POSSIBLE	Brand awareness being inconsistent with global brand image	Foreign Exchange Currency Volatility	
	PROBABLE		The competition in The business of energy and other beverages	The fluctuation in raw material prices and shortage of raw materials

## **Operational Risk**

### **The fluctuation in raw material prices and shortage of raw materials**

for each raw material, prices and shortages depend on different factors.

Sugar price varies according to the market's demand and supply and government's policy. Those issues may cause problems for business. The other factor that affects sugar price is Brazilian real (BRL) currency. since Brazil is the biggest sugar market in the world so if this currency changes that will affect the sugar price directly.

Glass cullet is a main component of amber-glass bottles of APG or the subsidiary company which manufactures and procurers of glass bottles. APG uses short-term contracts with suppliers for around a year. This way is normal for purchasing a glass cullet. By the way, APG cannot promise that suppliers can have sufficient glass cullets that APG can afford to buy. So APG can change other materials that can produce amber-glass bottles but this choice may increase the funding of APG. In the long term APG may have problems with financial inside.

Aluminum Coil is the main raw material used in the manufacture of ACM aluminum cans. To provide aluminum coils under a certain price and quantity, ACM has negotiated a short-term contract with a large company which has a processing plant with international standards. The aluminum coil price was fluctuating by market demand and supply. Therefore, the ACM may challenge higher production costs for aluminum which have a negative impact on the company' operation and financial.

## **Financial Risks**

### **Foreign Exchange Currency Volatility**

The currency exchange rate is the factor that can affect Carabao groups who have exposure to foreign currency due to subsidiaries conducting business in both domestic and international. For the ending of 2020, the company's oversea sales were 8,090 million baht which is US Dollar as a majority currency. However, the selling price was based on their own currency. So, CBG may use the derivative to stabilize the currency to limit the loss

## **Strategic Risk**

### **Brand awareness being inconsistent with global brand image**

Due to brand name, Carabao dang may lead to misunderstanding to clients because this origin name is from a country-band musician group. This may affect the image of global branding. However, CBG should make it clearly that is world class brand energy drink, company create space to world such as be a sponsor of football tournament in England Carabao Cup.

### **The competition in the business of energy and other beverages**

Energy drinks are products in a highly competitive market. Everyday there is a chance for new competitors to join this market. The other existing competitors still share some market. Nowadays, bottled energy drinks of 150 milliliters are normally sold in Thailand at THB 10. CBG should maintain or increase market share CBG held activities and promoted products. This is an important part in improving a company's profitability.

### **Launching new products to the market**

launching new products into the market is important. However, to do this will cost a lot of things such as development, advertising, manufacturing, marketing. If launching a product fails, it will have a negative effect on the company. However, to prevent as much failure as possible. companies have to set goals, strategies and other factors to achieve the company target.

## **Market Risks**

### **Outbreak Risk of Coronavirus Disease 2019 (COVID-19)**

The situation of the COVID-19 outbreak affects the global economy directly from the end of 2019 including Thailand from January 2020. This disease affects the cost and worker of the company, it costs health, economic and social conditions. However, after many countries took vaccines, this situation looks better.

For the fiscal year ended 31 December 2020, the Company got an effect from COVID-19 due to government policy that restricted people to traverse provinces and forbidden the sale of alcoholic beverages in the country during April 2020, the closure of international land shipping terminals to put in place measures to prevent COVID-19 infection. Though the government has those policies, the factory still operates with strict operations such as social distancing, keeping cleanness and so on with corporate strategy focused on sustainable growth. However, the company knows how important preparations are to make the factory come back to normal operation continuously. Company has created a management team to resolve the crisis, which contains senior executives of the organization who act as the commander and set up policies and guidelines/plans for business continuity management during this situation. This team will control factors that will cover all department cases that involve the company to handle the situation.

## **CHAPTER VI**

### **CONCLUSION**

Carabao Group (CBG) was founded in 2001, the company's major business is to manufacture, sell, and distribute its beverage products, mainly energy drinks, under the Carabao Dang brand. The 'Carabao Dang' trademark was created by combining the restaurant names 'German Tawandang Brewery Restaurant' and the name of the Thai folk band 'Carabao' to symbolize the 'Fighting Spirit' concept. CBG is now one of Thailand's top companies with a SET50 listing. Its core business can be classified into four categories based on product including Branded products by own manufacture, Branded products by 3<sup>rd</sup> party's manufacture, 3<sup>rd</sup> party's products for distribution, and others. In this report we have provided the macroeconomic and the industry outlook which would be capable of analyzing and valuing the company in the future.

The valuation method that we use to estimate the share value of Carabao Group Company Limited is the discounted cash flow (DCF) based on the cash flows it expects to generate in the future. So, the key components of the financial statement were forecasted based on the financial statement, industry trends, CBG's perspective strategies and expanded oversea sales. In WACC Calculation the cost of capital was computed by CAPM model and the cost of debt from CBG's interest expense.

The targeted price of CBG by using the DCF valuation was THB139.73 downside potential of -6.54%, compared to the current stock price of THB 149.5 (July 7th,2021). When considering the range's Price-Sensitivity analysis ranges between THB 51.27 to THB1,000.38, based on the assumption of WACC and Terminal growth rate. According to a broad pricing range, CBG provides an upside potential of 569.15% and downside risk of 65.71%. So, we recommend the investors to hold CBG stock at THB 139.73. However, the assumptions of DCF valuation relating to the terminal growth rate and WACC are extremely sensitive. Therefore, the assumption of terminal growth rate based on the oversea sale due to continued high demand in the

CLMV and China energy drinks markets, as well as sales growth from recently released functional beverages.

To conclude the DCF valuation, excludes any upcoming events that could have a substantial impact on CBG direction and performance such as the effect of epidemic or the impact from the government policies that it might lead to inaccurate valuation of the stock. However, we believe that our estimate accurately represented the targeted price of CBG at THB 139.73.





## CHAPTER VII

### DATA

## Financial Statement Analysis

**Table 7.1 CBG's Sales Forecasted**

Unit: THB million	2015	2016	2017	2018	2019	2020	CAGR (2016- 2020)	CAGR (2021- 2025)	2021F	2022F	2023F	2024F	2025F
<b>Domestic sales</b>	5,477	6,603	7,822	7,928	7,764	9,133	8.45%	10.01%	8,982	10,022	10,963	11,921	13,153
The Company's Branded Products													
Branded Products by Own Manufacture	5,475	6,163	6,083	6,098	5,823	5,985							
Branded Products by 3rd Party Manufacture	0	238	936	811	532	443							
Third-Party Products for Distribution	2	197	803	1,020	1,409	2,413							
Total Other Sales	0	6	0	0	0	292							
<i>growth rate</i>		20.56%	18.46%	1.36%	-2.07%	17.63%			-1.66%	11.59%	9.38%	8.74%	10.34%
<b>Overseas sales</b>	2,276	3,362	5,024	6,476	7,058	8,098	24.58%	12.55%	8,825	9,866	11,213	12,511	14,161
<i>growth rate</i>		47.72%	49.43%	28.90%	8.99%	14.74%			8.98%	11.80%	13.66%	11.57%	13.18%
Proportion of domestic over total sales	71%	66%	61%	55%	52%	53%			50%	50%	49%	49%	48%
Proportion of overseas over total sales	29%	34%	39%	45%	48%	47%			50%	50%	51%	51%	52%
<i>growth rate</i>									5%	0%	2%	1%	1%
<b>Proportion of domestic and overseas sales</b>	<b>71:29</b>	<b>66:34</b>	<b>61:39</b>	<b>55:45</b>	<b>52:48</b>	<b>53:47</b>			<b>51:49</b>	<b>50:50</b>	<b>48:52</b>	<b>46:54</b>	<b>44:56</b>
Total revenue from other sales			58	59	111	0			0	0	0	0	0
<b>Total sales revenue</b>	7,753	9,965	12,904	14,463	14,933	17,231	14.67%	11.29%	17,807	19,888	22,176	24,432	27,314
<i>growth rate</i>		28.54%	29.49%	12.08%	3.25%	15.39%			3.34%	11.69%	11.50%	10.17%	11.79%
<b>Other income</b>	121	147	164	135	119	151			178	199	222	244	273
Proportion of other income to total revenue	1.54%	1.45%	1.25%	0.92%	0.79%	0.87%			1%	1%	1%	1%	1%
<b>Total Revenues</b>	7,874	10,112	13,068	14,597	15,052	17,382	14.50%	11.29%	17,985	20,087	22,398	24,676	27,587
<i>growth rate</i>		28.42%	29.23%	11.71%	3.11%	15.48%			3.47%	11.69%	11.50%	10.17%	11.79%
<b>Cost of sales</b>	4,893	6,388	8,840	9,813	9,123	10,173			10,864	11,972	13,526	14,844	16,651
Proportional to total sales revenue	63.11%	64.10%	68.50%	67.85%	61.09%	59.04%			60.40%	59.60%	60.39%	60.16%	60.36%
<i>growth rate (lower rate, more efficient and effective)</i>		2%	7%	-1%	-10%	-3%							
<b>Gross Profit</b>	2,981	3,724	4,228	4,784	5,929	7,209			7,121	8,115	8,872	9,832	10,935
<i>gross profit margin</i>	38.46%	37.37%	32.77%	33.08%	39.71%	41.84%			39.60%	40.40%	39.61%	39.84%	39.64%
<i>growth rate (higher rate, more efficient and effective)</i>		-3%	-12%	1%	20%	5%			-5%	2%	-2%	1%	-1%
<b>Selling and Administrative Costs</b>	1,480	1,995	3,119	3,333	2,753	2,880			3,027	3,679	4,103	4,520	5,053
Selling Expense	1,120	1,484	2,379	2,561	1,968	1,915	11.32%	14.90%	1,959	2,486	2,772	3,054	3,414
Admin Expense	360	511	741	772	785	965			1,068	1,193	1,331	1,466	1,639
Selling Expense/Total Revenue	14.4%	14.9%	18.4%	17.7%	13.2%	11.1%			11.0%	12.5%	12.5%	12.5%	12.5%
Admin Expense/Total Revenue	4.6%	5.1%	5.7%	5.3%	5.3%	5.6%			6.0%	6.0%	6.0%	6.0%	6.0%
<b>Other expenses</b>	35	42	0	16	12	0			18	14	7	11	11
<b>EBIT</b>	<b>1,466</b>	<b>1,687</b>	<b>1,109</b>	<b>1,435</b>	<b>3,165</b>	<b>4,333</b>			<b>4,076</b>	<b>4,422</b>	<b>4,763</b>	<b>5,301</b>	<b>5,872</b>
FINANCE COSTS	1.6	3.7	48	107	133	107			86	69	75	81	81
EBT	1,465	1,683	1,061	1,329	3,032	4,227			3,990	4,353	4,688	5,220	5,791
TAX	209	278	261	368	564	667			798	871	938	1044	1158
TAX(%)	14.3%	16.5%	24.6%	27.7%	18.6%	15.8%	19.6%		20%	20%	20%	20%	20%
<b>Profit</b>	<b>1,256</b>	<b>1,405</b>	<b>801</b>	<b>960</b>	<b>2,468</b>	<b>3,559</b>			<b>3,192</b>	<b>3,482</b>	<b>3,750</b>	<b>4,176</b>	<b>4,633</b>
NON CONTROLLING INTERESTS	-	-84.9	-445.2	-198.3	-38.2	34.1			30.6	33.4	36.0	40.0	44.4
NET PROFIT TO EQUITY HOLDERS OF PARENT	1,256	1,490	1,246	1,159	2,506	3,525			3,162	3,449	3,715	4,136	4,588
NUMBER OF SHARES (MN)	1000	1000	1000	1000	1000	1000			1000	1000	1000	1000	1000
<b>EARNINGS PER SHARE (BT)</b>	<b>1.26</b>	<b>1.49</b>	<b>1.25</b>	<b>1.16</b>	<b>2.51</b>	<b>3.53</b>			<b>3.2</b>	<b>3.45</b>	<b>3.71</b>	<b>4.14</b>	<b>4.59</b>

Table 7.2 CBG's Working Capital Forecasted

Unit: THB million	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>Working Capital</b>											
A/C RECEIVABLES	425	562	960	907	1,140	1,420	1,464	1,635	1,823	2,008	2,245
INVENTORY	249	434	656	887	992	1489	2,195	2,452	2,734	3,012	3,367
A/C PAYABLES	802	1365	1897	1810	1447	1573	2,927	3,269	3,645	4,016	4,490
WORKING CAPITAL	-128	-370	-281	-16	685	1,337	732	817	911	1,004	1,122
WORKING CAPITAL CHANGE		-242	89	265	701	652	-605	86	94	93	118
AC RECEIVABLE DAYS	20	21	27	23	28	30	30	30	30	30	30
INVENTORY DAYS	19	25	27	33	40	53	45	45	45	45	45
AC PAYABLE DAYS	60	78	78	67	58	56	60	60	60	60	60
CASH CYCLE	-21	-33	-24	-11	10	27	15	15	15	15	15

Table 7.3 CBG's Cash Flows Forecasted

Unit: THB million	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>Cash Flows (Tong)</b>											
EBIT	1,466	1,687	1,109	1,435	3,165	4,333	4,076	4,422	4,763	5,301	5,872
DEPRECIATION	236	226	263	464	534	668	608	620	632	645	658
- Depreciation / Fixed Assets	5.05%	4.01%	3.24%	4.48%	4.86%	5.84%	5.00%	5.00%	5.00%	5.00%	5.00%
EBITDA	1,702	1,913	1,372	1,899	3,699	5,002	4,684	5,041	5,395	5,945	6,529
OPERATING CASHFLOW	1,702	1,671	1,461	2,164	4,400	5,653	4,079	5,127	5,489	6,038	6,648
CAPEX	-199	-2,142	-2,979	-2,053	-428	-1,655	-1000	-1000	-1500	-1500	-1500
	4.27%	32.33%	31.00%	18.51%	3.94%	13.76%	-8.15%	-7.99%	-11.75%	-11.52%	-11.29%
FREE CASHFLOW	1,503	-472	-1,518	111	3,972	3,998	3,079	4,127	3,989	4,538	5,148

Table 7.4 CBG's Capacity &amp; Efficiency Forecasted

Unit: THB million	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	
<b>CAPACITY &amp; EFFICIENCY</b>												
FIXED ASSETS		4,667	6,627	9,609	11,090	10,872	12,032	12,273	12,518	12,768	13,024	13,284
FIXED ASSET (WITH INTANG. + GW)		4,683	7,178	7,005	7,365	8,718	10,157	9,572	8,987	8,386	7,766	7,131
TOTAL ASSETS		7,361	9,778	12,520	14,320	14,780	17,087					
FIXED ASSET TURNOVER		1.69	1.79	1.61	1.41	1.37	1.52	1.48	1.62	1.77	1.91	2.10
FIXED ASSET TURNOVER (WITH INTANG. + GW)		1.68	1.71	1.50	1.33	1.30	1.44					

Table 7.5 CBG's Leverage Forecasted

Unit: THB million	2015	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>LEVERAGE</b>											
CASH AND NEAR CASH	1,851	1,349	154	138	962	947	884	937	1022	1089	1161
INTEREST BEARING DEBT	0	1,000	3,393	4,741	4,129	4,488	3000	3000	3500	3500	3500
EQUITY	6,333	7,100	7,005	7,365	8,718	10,157	9,572	8,987	8,386	7,766	7,131
DIVIDEND (Accrual basis)	950	940	950	700	1,100	2,100	3747	4033	4316	4756	5223
DPS	0.95	0.94	0.95	0.7	1.1	2.1	4	4	4	5	5
DIVIDEND PAYOUT	75.66%	63.09%	76.26%	60.42%	43.89%	59.57%	80%	80%	80%	80%	80%
NET DEBT / EQUITY	-29.22%	-4.92%	46.23%	62.50%	36.32%	34.86%	22.11%	22.95%	29.55%	31.05%	32.80%
INTEREST EBITDA COVER	1038	520	29	18	28	47	54	73	72	74	81
EFFECTIVE INTEREST RATE		0.74%	2.17%	2.63%	2.99%	2.48%	2.30%	2.30%	2.30%	2.30%	2.30%
USDTHB AVERAGE FX											
NUMBER OF SHARES	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
ROA	0.4050	0.3808	0.3377	0.3341	0.4012	0.4219	0.5802	0.6483	0.6949	0.7549	0.8232

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