DISCOUNTED CASH FLOW VALUATION OF MK RESTAURANT GROUP PUBLIC COMPANY LIMITED



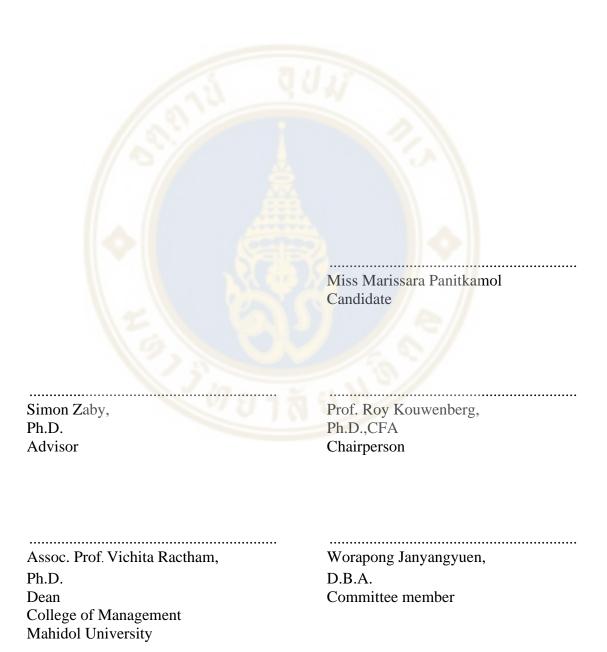
A THEMATIC PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MANAGEMENT COLLEGE OF MANAGEMENT MAHIDOL UNIVERSITY 2021

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DISCOUNTED CASH FLOW VALUATION OF MK RESTAURANT PUBLIC COMPANY LIMITED

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M.M. (CORPORATE FINANCE)

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ABSTRACT

This thematic paper applied the principle of discounted cash flow valuation approach to evaluate the intrinsic value of MK Restaurant Group PCL (M)'s share price.

MK Restaurant Group PCL (M) and its subsidiaries operate multi-chain restaurant companies under brands MK, Yayoi, Miyazaki, Hakata and Laem Chareon. M also has franchise agreements with partners to operate franchised restaurants in Asia.

According to the discounted cash flow analysis, M revenue is expected to recover and increase about 3.0% (CAGR 2021 – 2026) as the resulted of COVID-19 vaccination efficiency and economic recovery. This also consequently drive operating income grow by 6.0% CAGR at the same period. After that M's growth follows Thailand GDP perpetual growth at 2.89%. The M target price is 60.76 Baht per share as of 31 December 2021. This price is in greater upside about 20% higher than latest stock price at 50.75 Baht as of 9 July 2021. The recommendation on undervalued share price of M is to "BUY"

KEY WORDS: MK/ Restaurant/ Valuation/ Discounted Cash Flow

37 pages

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CHAPTER I INTRODUCTION

MK Restaurant Group PCL (M) operates over 700 restaurant outlets for Suki, Thai, and Japanese restaurants in Thailand under brands MK, Yayoi, Miyazaki, Hakata and Laem Chareon. M also has franchise agreements with partners to operate franchised restaurants in Japan, Vietnam, Laos and Singapore. More than 90% of the M's revenue comes from Thailand. There are three major brand contributions which is MK Suki's 74%, Yayoi's 18% and Leam Chareon 5% approximately. M has robust strategies to encourage sales improvement and operation efficiency. The key success strategy comprises of branding and marketing, products and services, customer retention, branch locations selection, diversifying distribution and cost management.

Since COVID-19 Thailand's first outbreak, M has been adversely affected from government control measures. Restaurant business was mandated for temporary closure and operation restriction. Though, M adapted its marketing strategy to focus more heavily on selling through online and delivery channels. This can boost some increasing in sales and compensate partly for the sales loss. That resulted M's revenue declined for 23.25% from 2019 and the earnings per share (EPS) fall by 65% in 2020.

However, Thailand's economic recovery in the period ahead based on a coverage of vaccination in Thailand, no government restriction and relaxation in all economic activities. This is driven GDP growth and domestic spending arise.

According to the DCF analysis, M revenue is expected to recover and increase about 3.0% (CAGR 2021-2026) as the resulted of COVID-19 vaccination efficiency and economic recovery. This also consequently drive operating income grow by 6.0% CAGR at the same period. After that M's growth follows Thailand GDP perpetual growth at 2.89%.

The M target price is 60.76 Baht per share as of 31 December 2021. This price is in greater upside about 20% higher than latest stock price at 50.75 Baht as of 9 July 2021. The recommendation on undervalued share price of M is to "BUY"

CHAPTER II MK RESTAURANT GROUP PCL

MK Restaurant Group Public Company Limited ("company", "M"), Thai-based company operates multi oriental chained-restaurant. The Company is principally engaged in sales of foods and beverages through restaurants, under the trademark "MK Restaurants".

2.1 Business

MK Restaurant Group Public Company Limited operates two business segments as chained restaurant business (multi-brands) and other business. The restaurant businesses comprise many types of restaurants as Suki restaurant, Japanese restaurant, Thai and seafood restaurant, including coffee shop and bakery business. In 2021, the company operates 713 outlets nationwide and 46 overseas outlets in Japan, Singapore, Vietnam and Indonesia. Another business segment includes home delivery and catering services and training center services. The overseas businesses operate by its subsidiaries who get the company's franchise right.

The company has been in Thailand restaurant business for over 50 years since 1962 with successive milestones. In 2013, the company listed on the Stock Exchange of Thailand.

Table 2.1 Company Timeline

Year	Key success
1962	The beginning of MK at Siam Square Soi 3 managed by Aunty
	Thongkam Mekto.
1986	First Branch of MK at Central Ladprao
1987 – 1996	Growth state

Table 2.1 Company Timeline (cont.)

Year	Key success
1994	MK has opened its first branch in Japan
1996	All branches have changed the gas operated pot to electronic ones
2006	First franchised "Yayoi" Japanese restaurant opened in Thailand
2009	MK celebrated the opening of the 300 th branch
2010	MK has opened its first branch in Vietnam
2012	Opening "Hakata" and "Miyazaki" Japanese restaurant and "La Petit" coffee shop and bakery
2013	MK celebrated the opening of the 400 th branch in Thailand, Japan, Singapore, Indonesia and Vietnam Listed in SET, IPO with a par value of Baht 1 each
2015	First MK Restaurant in Laos
2018	Joined with M-Senko Logistics Company Limited to operate logistic, warehouse rental, trading and forwarding businesses.
2019	Invested in 65% of shares of Laem Charoen Seafood Company Limited.

Source: MK Restaurant Group Public Company Limited. (2021, July). MK History.

2.2 Services and brands

MK Restaurant Group Public Company Limited classifies into main three restaurant businesses as hotpot restaurant, Japanese restaurant, Thai / Seafood restaurant. Others are grab and go, coffee and bakery, catering and overseas franchises. The company wholly operates hotpot restaurant business under trade mark MK restaurant NK The company differentiates into three MK names which is MK Suki, MK Gold and MK Live. MK Suki is the first brand with the most branches in shopping malls and community areas. MK Suki offers Thai hotpot with a variety of meat, meatballs and fresh vegetables. MK Gold is a premium-graded hotpot for high income customer. And MK Live designs for modern customer's lifestyle and customer can experience in live preparation and chef cooking.

Japanese restaurant business has three brands. Yayoi, the second most branches, provide à la carte Japanese menus. Miyazaki offers Japanese Teppanyaki grilled dishes. And Hakata offers Japanese ramen with varieties of soups.

Thai and seafood restaurant business comprise three brands as Na Siam, Le Siam and Laem Chareon Seafood. Na Siam offers traditional Thai menus for medium to high-end customers. Le Siam offers luxurious premium-graded food and beverages for foreign customers and high-income earners. Laem Chareon Seafood is a new brand after in 2019, the company acquired 65% of shares in Laem Charoen Seafood Company. Laem Charoen is a seafood restaurant offering various seafood menus.

The other brands are grab and go shop under Bizzy Box, coffee shop and bakery outlet under Le Petit and dessert shop under MK Harvest. Catering business provides home delivery and catering services for MK Suki and Yayoi. And overseas restaurant business is operated partners who get the franchise right from MK Restaurant Group Public Company Limited. The company has a franchise agreement with Plenus-MK Limited for Sukiyaki restaurants in Japan, and Yayoi restaurant in Singapore. Global Investment Gate Joint-Stock Company and Premium Food Co., Ltd gets franchise right of MK Suki in Vietnam and Laos.

Table 2.2 Restaurant brands and outlets

Type of	Restaurants	Brand	No of outlets					
business	ACCOUNT COLOR	Diana	Total	Thailand	Overseas			
Suki	MK	MX	485	449	Japan – 26			
Restaurant		RESTAURANTS			Vietnam – 8			
					Laos - 2			
	MK Gold	RESTAURANTS	5	5				
	MK Live	MX LIVE	4	4				

Table 2.2 Restaurant brands and outlets (cont.)

Type of	Restaurants	Brand	No of outlets					
business	Restaurants	Dianu	Total	Thailand	Overseas			
Japanese	Yayoi	y a y o i	205	194	Singapore – 11			
Restaurant	3.6	575	2.1	21				
	Miyazaki	MIYAZAKI	21	21				
	Hakata	HAKATA	6	6				
Thai /	Na Siam	TILAT RESTAURANTS	1	1				
Seafood	// 10	1 0 max						
restaurant	Le Siam	Le Giam	3	3				
	Leam		29	29				
	Chareon	LAEM CHAROEN SEAFOOD แกลมเจริญขี่ผู้ค						
	Sea food	A						
Others	Bizzy Box	BIZZY	6	6				
\\	Le Petit	Rtil	3	3				
	Harvest	AND I MANAGE	1	1				

Source: MK Restaurant Group Public Company Limited. (2021). *MK* 2020 Annual Report (pp. 14 – 21).

2.3 Revenue

There are three major sources of revenue from sales and service as MK, Yayoi and Laem Chareon restaurant which is 98% approximately of total M's revenues. Most of revenue is from domestic sales. The other revenues are from Miyazaki, Hakata, Na Siam, Le Siam, Bizzy Box, Le Petit and MK Harvest.

In 2020, M's revenues from sales and services 23.3% dropped in 2020. All restaurant brands except Laem Chareon have decreased sales. The decrease was mainly

because the outbreak of the COVID-19 in Thailand has continued to spread rapidly and widely and the government implemented lockdown measures. The 2020 revenues show in table 2.3 (MK 2020 Annual Report, 2021)

Table 2.3 Revenue Structure

	2019)	2020	% Increase		
	Million Baht	%	Million Baht	%	(Decrease)	
MK Suki/ MK Gold/ MK Live	13,580	78.0	9,898	74.1	(27.1)	
Yayoi Japanese Restaurant	3,320	19.1	2,440	18.3	(26.5)	
Laem Charoen Seafood*	117	0.7	748	5.6	537.4	
Other Restaurants**	392	2.2	276	2.0	(29.6)	
Revenues from Sales and Services	17,409	100.0	13,361	100.0	(23.3)	

Source: MK Restaurant Group Public Company Limited. (2021). MK 2020 Annual Report

M's net profit was affected accordingly, and profit decreased to 6.8% from 14.4% of 5 years-average. In 3M 2021, net profit has some improvement because of lockdown relaxation in some period. However, new wave spreading in April 2021 will negatively impact to 2021's revenue and net profit. (Refinitiv, 2021)

	2014	2015	2016	2017	2018	2019	Avg 2104 - 2019	2020	3M/2020	3M/2021
Net Profit - %	14.1%	12.8%	13.9%	15.1%	15.4%	15.0%	14.4%	6.8%	8.8%	2.7%

Source: M.BK Refinitiv, (2021)

2.4 Strategies

M has developed and implemented business strategy in many dimensions, such as product and services, branding, marketing and cost. M provides varieties of menus by launching seasonal soup, trendy ingredients and collaborate with partner brands. M also applies loyalty program into digital platform (LINE, myMK application). For branding and marketing, M uses advertising to make the brand widely known as an outstanding quality of product and services. M offers healthy and convenient food at a reasonable price and standardized quality to maximize customer satisfaction.

For procurement product and services, M has two central kitchen factories to supply raw materials, check quality, prepare ingredients and cook food. The shared kitchens use for product distribution center to all branches across the country.

In 2020, COVID-19 outbreak, measures and customer behavior change have challenged M. Product, marketing and sales strategy was changed to support by expanding distribution channel to online channel and collaborating with delivery partners. In additional, M launches new products and delivery set promotions.

2.5 Corporate governance

According to M annual report 2020, it has applied CG rules and regulations in the operation while it adopted policy to manage the business and supervise internal functions. The goal is to ensure that the business operates run efficiently and effectively to achieve its objectives. The essence of the CG is to commit to integrity, transparency, ethical practice and fairness when doing business to reinforce confidence among shareholders, investors, customers, staff, and all stakeholders. Personnel are encouraged to be aware of the principles and to commit to moral practices when conduct the service business. Both financial and non-financial information will disclose timely to shareholders. Stakeholders equally access the information. To reflects the Company's standards of management. Currently, company CG report score is at 4 from SET. (SET,2021)

CHAPTER III FOOD AND RESTUARANT INDUSTRY OUTLOOK

3.1 Thailand economic analysis

Thailand's economy was attacked by COVID-19 pandemic since 2020. The pandemic caused a sudden halt in tourism flows and a significant contraction in economic activity. Thailand's GDP fell by 6.1 percent in 2020.

The tourism sector, which accounts for about a fifth of GDP, has been especially affected by the cessation of tourist travel. From prolonged and more intense third wave outbreak that affects domestic spending and the number of foreign tourists. Private consumption and labor markets became more fragile and relief more slowly than in the past, especially the services sector and among the self-employed. Bank of Thailand expected GDP to grow 1.8% in 2021 and 3.9% in 2022. (Monetary policy report, June 2021)

Additional economic stimulus measures from new Emergency Decree, clearer plans for purchasing and distributing vaccines. As well as strong export growth from trading partner economies will help the Thai's economy to recover. (IMF, 2021)

Table 3.1 Thailand GDP Growth

		20	21 ^E	2022 ^E		
(% YoY)	2020					
		Mar 21	Jun 21	Mar 21	Jun 21	
GDP Growth	-6.1	3.0	1.8	4.7	3.9	
- Private Consumption	-1.0	3.0	2.5	2.7	3.4	
- Private Investment	-8.4	6.0	7.0	5.5	6.0	
- Government Consumption	0.9	5.2	4.1	-3.1	-1.0	
- Public Investment	5.7	11.6	9.5	0.8	5.7	
- Exports of Goods and Services	-19.4	5.2	8.8	13.9	7.8	
- Imports of Goods and Services	-13.3	9.2	15.0	7.5	5.5	
Current Account* (Billion USD)	16.3	1.2	-1.5	25.0	12.0	
- Value of Merchandise Exports	-6.6	10.0	17.1	6.3	4.9	
- Value of Merchandise Imports	-13.5	15.2	22.7	6.8	6.6	
Headline Inflation	-0.8	1.2	1.2	1.0	1.2	
Core Inflation	0.3	0.3	0.2	0.4	0.3	
Assumptions						
- Number of Tourists (Million)	6.7	3.0	0.7	21.5	10.0	
- Dubai Oil Price (USD/Barrel)	42.2	60.0	62.3	62.5	65.5	

Note: ^E Estimation

Source: Monetary policy report. (2021).

Headline inflation was projected to be 1.2% in 2021 and 2022. The increase is an effect from the global supply on crude oil price. Headline inflation will remain within the target range throughout the forecast horizon.

In Monetary policy report, June 2021 assessed the different GDP on outbreak scenarios (figure 3.1). At the baseline expected the outbreak end at the end of 2022 and recovery to pre-COVID level in early 2023. The worst case is for more severe and prolonged outbreak. The forecasted GDP's worst case will be lower and the recovery will be longer.

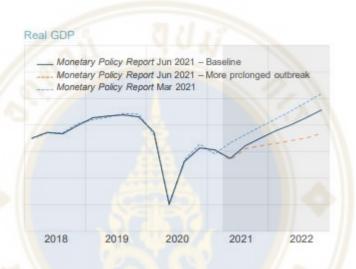


Figure 3.1 BOT GDP Growth Projection.

Source: Monetary policy report, June 2021

Tourism

Income from spending by foreign tourists account for 11% of GDP and tourism-related businesses account for 20% of total employment in Thailand. The tourism recovery depends on foreign tourist arrivals. Bank of Thailand foresee tourism recovery in three scenarios (Baseline / Worse case / Worst case) base on efficacy of COVID-19 vaccines and Thailand reopening. (BOT Monetary Policy Report March 2021, 2021)

As August 2021, Thailand recovery tends to be worst case as new virus mutation and COVID-19 vaccination rate. The foreign tourist figure is 0.1 million for both 2021 and 2022, and the Thai economy would contract 1.7% in 2021 and 0.3% in 2022, approximately.

Table 3.2 Foreign Tourist Projection

	1. Baseline		2. Wors (3 rd wa COVID-19 i	ive of	Worst case (A virulent virus mutation)			
	2021	2022	2021	2022	2021	2022		
Foreign tourist figures (million persons)	3.0	21.5	0.1	10.0	0.1	0.1		
Economic growth (percent)	growth 3.0 4.7		- 0.5	3.5	- 1.7	- 0.3		
Source: forecast by Bank of Thailand								

Source: BOT Monetary Policy Report March 2021.(2021). The recovery in foreign tourist arrivals - a key risk to Thailand's economic recovery

3.2 Industry analysis

Food and restaurant industry has been challenged after significant growth in past years. Since 2019, the slowdown economic, tourism industry shrinking which related to food and restaurant industry and in 2020, COVID-19 pandemic and lockdown affect to the industry. The factors which drive the industry as following.

3.2.1 **Industry growth**

• Domestic consumption growth decline

The growth of the restaurant industry has been largely driven by economic growth. The fragile purchasing power is the crucial impact from economic slowdown and COVID outbreak. Domestic spending on food, beverage and restaurant were decreased. This crisis has been prolonged after 2021 which economic assume to recover after that. The longer crisis will diminish the domestic purchasing power and business will be in riskier on liquidity and go out of the industry. The Office of The National Economic and Social Development Council projected Thai Economic Performance in Q1 and Outlook for 2021 that the GDP will decreases by 2.6% in Q1 2021 and in 2021 growth will be about 1.5% - 2.5%, especially by private consumption sector follow same decreasing trend.

Table 3.3 Thailand Economic Projection of 2021

Economic Projection of 2021										
(%YoY)	2019		2020				2	021		
(%0101)	Year		Year	Q3	Q4		Q1	Year (f)		
GDP (CVM)	2.3		-6.1	-6.4	-4.2		-2.6	1.5 - 2.5		
Investment ^{1/}	2.0		-4.8	-2.6	-2.5		7.3	5.3		
Private	2.7		-8.4	-10.6	-3.3		3.0	4.3		
Public	0.1		5.7	17.6	0.6		19.6	9.3		
Private Consumption	4.0		-1.0	-0.6	0.9		-0.5	1.6		
Government Consumption	1.7		0.9	2.5	2.2		2.1	5.1		
Export of Goods ^{2/}	-3.3		-6.6	-8.2	-1.5		5.3	10.3		
Volume ^{2/}	-3.7		-5.9	-7.6	-1.6		3.1	7.3		
Import of Goods ^{2/}	-5.6		-13.5	-19.4	-5.9		9.5	13.1		
Volume ^{2/}	-5.8		-10.1	-16.5	-2.9		6.6	9.1		
Current Account to	7.0		3.3	5.4	-1.0		-1.9	0.7		
GDP (%)										
Inflation	0.7		-0.8	-0.7	-0.4		-0.5	1.0 - 2.0		

Note: 1/ Investment means Gross Fixed Capital Formation

Source: The Office of The National Economic and Social Development

• Slow growth in tourism industry

The growth in the tourism industry correlate to restaurant expansion. According to the Office of National Economic and Social Development Council, the Thai economy is expected to decrease between 7.8 and 7.3 percent in 2020 as a result of Covid pandemic, lockdown restriction and economic recession. In Thailand the tourism accounts approximately 13-14% of Thailand total GDP. Therefore the food and beverage spending by tourist estimate forecast as low to no growth in 2021-2022.

3.2.2 Customer behavior change

• Delivery service

The consequence of Covid-19 lockdown and the government restriction to control new wave spread to prohibit sit-in restaurant also force customer to change their lifestyle. Many restaurants adapt food delivery service to support customer requirement. In 2021 January, Thais use online food deliver through providing platforms such as mobile-based delivery services such as Line Man, GrabFood, Food Panda, and Get Food (Gojek). This delivery sales foresee significant growth and total value of online food delivery market is increasing. Some of offline demand by full-service or sit-in restaurant

^{2/} base on the Bank of Thailand's data

will shift to online for food delivery. All restaurants need to accommodate the online food service to serve the increasing online demand.



Figure 3.2 Online Food Delivery Market Size and Growth

Source: DataReportal. (2021). DIGITAL 2021: THAILAND.

https://datareportal.com/reports/digital-2021-thailand

Food trend

Initiative trend from health-conscious customer will influence new food trend for health and wellness, sustainability and hybrid products. These food trends were introduced to some customer group but social and hygiene will drive customer behavior and consideration for good teste and good for health.

3.3 Competition analysis

Thailand have encountered fierce competition from not only local Thai hotpot restaurant but also imported restaurant such as Haidilao which is a famous Chinese hotpot chain that came to Thailand in late 2019.

The restaurant business that the company operate is in intense competition increase every, Company have to compete with many competitors both domestic and international, well-known restaurant chains and various of small individual restaurants As new rivals enter restaurant business, the competition in this business depended on

quality and price, brand reputation and strength, value and variety of menu, advertising and sales promotion, number of outlets, attractiveness of new menu, restaurant's atmosphere and the way to attract new customers and also maintain loyal customers. Success in this business depend on ability to compete with rivals.

Despite a fierce competition on the restaurant markets, MK until now was able to grow. Company has many competitive advantages. 1.MK and Yayoi brand are highly recognize and favor by customers so company has strong brand reputation. 2. strong financial position, company has ability to expand business when company sees sophisticated opportunities in short and long term. 3. effective and high experienced management team that has been in restaurant business over 20 years which make company manage business efficient and effective. 4. Company own service training center which increase management skills of branch managers and standardized services skill of all staffs at all company's branches. 5. Good strategic locations of MK and Yayoi nationwide. 6. Large business size to gain economy of scale in many parts of business area such as sourcing, purchasing, advertising, marketing and transportation. 7. New and sophisticated central kitchen and distribution center that will increase capacity and capability for future restaurant expansion.

M Competitors are listed below

• Zen Corporation Group PCL (ZEN) is a Thailand-based full-service restaurant company. The Company mainly provides catering and delivery services. There are 3 business categories by the company first, restaurant business that have 12 brands which is Japanese and Thai total 110 branches the brands are Zen, Musha by Zen, AKA, On the Table, Tetsu and Sushi Cyu; within the Thai cuisine under Tummour Group are Tummour, Lao Yuan, Jaew Haun, Pho, De Tummour and Khiang. Second, franchise business in Thai cuisine has 145 branches driven by Tummour Group. Third, related business such as food delivery and restaurant. Management services such as Bento boxes at seminars or conferences. Revenue from food and beverage account for 96.2% of total revenue, 2.4% from franchise fee and 1.4% from other income. (Zen Management Discussion and Analysis, 2021)

- S&P Syndicate Public Company Limited (SNP) is a Thailand-based company operate in the restaurants and bakery business. Total revenue of 2020 is 5,199 million Baht decreased from 2019 at 7,312 million Baht by 28.9%. Net income is 183 million Baht decreased from last year by 41.7% because the lockdown occurred in Thailand. Source of income mainly from domestic restaurant and bakery shop that account for 85.13%. Packages food and bakery trading 11.06% and overseas restaurant 3.81%. By 2020, SNP operates 502 branches in domestic and 15 restaurant oversea. The majority of branches came from S&P bakery shop (335 branches). S&P restaurants and bakery focus on mass and family customer while other brands focus more in unique targets. For international business company expanding in form of direct investment and joint investments with local investors. (SNP annual report, 2020)
- Oishi Group Public Company Limited (OISHI) is a Thailand-based company operate in Japanese restaurant and bakery, and distribution of food and beverage. Business operations of the Company and its subsidiaries consist of two main segments First is food business which include chain of restaurants, Shabushi 162 branches, Oishi Ramen 52 Branches, Kakashi 18 branches, Oishi Buffet 9 branches, Oishi Eaterium 9 branches, Nikuya 8 branches, Hou Yuu (3 branches) Oishi Grand 1 branch, Oyoki 1 branch, Oishi Delivery 1,151 outlets OISHI TO GO 1 branch and Oishi Food Truck 1 truck. For operation in ready to cook and ready to eat business company operate by OISHI EATO with Japanese-style and high-quality chilled and frozen products. Second business is beverage, company and its subsidiaries has beverage products with various flavors and packaging by OISHI GREEN TEA, OISHI GOLD and OISHI CHAKULZA. Proportion of income is beverage 56% and food 44%. Total revenue of OISHI is 11,366 million Baht in 2020 which decreased 17.4% from 13,631 million Baht in previous year. This was mainly due to the decrease in food revenue. The decline was largely driven by the pandemic that pressure consumer purchasing power. (OISHI annual report, 2020)
- Haidilao International Holding Ltd (6862.HK) is a China-based company of hot pot founded in China in 1994. Haidilao is the largest hot pot chain in China. Haidilao also sell takeaway food and the majority of income come from domestic

market. Revenue of Haidilao 2020 is 131,256.45 million Baht increased by 7.8% compare to 2019, mainly from business expansion but net income decrease to 1,418.66 million Baht decreased by 86.8% from last year due to the outbreak of the COVID-19 pandemic. Haidilao restaurant operation account for 95.9% of total revenue. By the end of 2020, Company has opened total 1298 branches. 1,025 branches in China and 93 branches oversea. (*Refinitiv*, 6862.HK, 2021)

Xiabuxiabu Catering Management China Holdings Co., Ltd (0520.HK) is a China-based investment holding company mainly operate in fast casual restaurant operation. The group main source of income come from Xiabuxiabu casual hot pot restaurants. The Company mainly operate business in domestic market. Revenue of group decreased by 9.5% from 27,661.13 million Baht in 2019 to 25,023.55 million Baht in 2020. Company net profit decreased by 67.1% mainly due to COVID-19 pandemic. Since January 2020 company suspended a majority of it restaurant operation and start to reopen in March 2020. Xiabu Xiabu has become the largest individual, barstyle hotpot restaurant chain in China and contributed around 64.2% of all revenue. And CouCou Hotpot provides an upgraded shabu-shabu and a rich variety of afternoon tea. The soup base of CouCou have continued XiabuXiabu's classic ones. The spending per head of CouCou is 580.73 THB, which is double from XiabuXiabu (285.78 THB). In 2020, the group has 1,201 restaurants, under the brand Xiabu Xiabu 1,061 branches and Coucou 140 branches covering major metropolitan markets and cities, including Beijing, Shanghai, Guangzhou and Shenzhen. The company has been expand rapidly, in 2020 the group open 91 Xiabu Xiabu restaurants and 38 Coucou restaurants. (520.hk annual report, 2020)

CHAPTER IV VALUATION

4.1 Discounted cash flow valuation

Discounted cash flow is a valuation method to estimate the company's intrinsic value by using forecasted free cash flows and discounting the cash flows to present value.

4.1.1 Pro forma income statement

The pro forma statement is forecasted M's cash flow in the next 5 years (2021–2025). Most revenues are estimated from historical revenue share in domestic 3 brand revenues as MK, Yayoi and Laem Chareon which account 98% of total M's revenues. I estimate revenue growth referring to Thailand GDP has observed a strong relationship in the linear regression model between Thailand GDP per capita and M revenues (Appendix C). The spending per outlet is the key driving revenue and growth follow forecasted GDP. The M's revenue growth is adjusted with business plan, eventually.

For expenses comprise cost of sales and services and selling, general and administrative expenses (SG&A). Cost of sales and services is variable and incurred cost depending on sales that include ingredient and food production. I estimate cost of sales and services by linear regression with total revenue. And SG&A is the combination of fixed and variable. The SG&A estimation calculates from a fixed percentage of total revenue and linear regression model (Appendix C).

M used to be debt-free company but after 2020, M has been adopted lease liability in accounting policy. The lease liabilities have taken into account for interest bearing debt. I project finance cost refer to 2020's interest as base line and gather with operating cash lending.

The forecasted tax expense is calculated at 20% of corporate tax into EBIT after less finance cost. The pro-forma income statement is shown as in Table 4.1

Table 4.1 Pro forma statement

							Million THB
Year	2019	2020	2021F	2022F	2023F	2024F	2025F
Revenue from sales and services	17,017	13,086	13,066	13,158	13,395	13,649	13,909
MK	13,580	9,898	9,789	9,858	10,035	10,226	10,420
Yayoi	3,320	2,440	2,538	2,555	2,601	2,651	2,701
Laem Chareon	117	748	740	745	758	773	787
Other revenue	392	275	272	274	279	284	289
Total Revenues	17,409	13,361	13,338	13,432	13,673	13,933	14,198
G	£ 402	4.555	4 450	4.40	4 7 40	4 624	4.500
Cost of Revenue	5,483	4,577	4,472	4,497	4,562	4,631	4,702
SG&A	9,183	7,947	7,679	7,713	7,802	7,896	7,993
Total Expenses	14,666	12,524	12,151	12,210	12,363	12,528	12,695
EBITDA	3,520	2,974	2,854	3,008	3,217	3,442	3,670
Depreciation	777	2,137	1,667	1,787	1,907	2,037	2,167
EBIT	2,743	837	1,187	1,221	1,310	1,406	1,503
Financial Cost	1	73	68	46	49	48	43
Tax	553	140	224	235	252	272	292
Net Profit	2,189	624	895	940	1,009	1,086	1,168
EPS	2.83	0.99	0.97	1.02	1.10	1.18	1.27

In 2020, M's revenue from sales and services decreased from COVID-19 outbreak in term of lock down measures, fatigued domestic spending and no tourism. I expect the wave three spreading to prolong and economic to be recovered at the end of 2021 or middle of 2022. During this period, I forecast sales growth about -1.10% and 0.70% in 2021 and 2022, respectively. Then, sales growth will slowly increase to attain the expected CAGR growth at 1.57% (2021–2025). Depreciation and financial cost are stable averagely and arose when business recovery. Net profit and EPS are determined in the same recovery way, however, projected net profit or EPS of 2025 is below pre-COVID.

The pro forma statement shows the expected cash flow under M's business assumption. Discounted cash flow use to determine the generating value in each year to be the present value.

4.1.2 Weighted Average Cost of Capital

I use the weighted average cost of capital (WACC) as discounted rate for M cash flow. WACC comprises the cost of capital, estimated by Capital Asset Pricing (CAPM) Model and cost of debt by interest bearing debt refer to M 2020's effective interest rate after tax (*M financial statement. 2020. Notes. pp 72*).

WACC = Cost of Equity + Cost of Debt
=
$$W_e \times r_e + W_d \times r_d$$

Cost of capital's methodology is Capital Asset Pricing Model (CAPM) estimation. Risk free rate refer to 10 years government bond yield as of 9 July 2021. Beta is the coefficient between M share price return and SET total return index (SET TRI). From Grelt Ordinary Least Squares simulation for 5 years-beta equal to 0.77 (Appendix D).

Equity risk premium (ERP) refers to Refintiv Thailand ERP as of 14 August 2021 is 7.63% and from Professor Aswath Damodaran is 7.82% on January 8, 2021 (Appendix D). Thus, I use the latest equity risk premium rate from Refintiv in the calculation to reflect the Thailand equity risk premium.

The weight of equity and debt are the fraction of market value of the M's equity (market capital) and M's interest bearing debt which equal to 92.81% and 7.19%, respectively. The equity has more weighted proportion from M business structure and main shareholders, holding 70.5% of total, is M founding family (Appendix D).

The Table 4.2 shows WACC calculation. The result is 7.17%

Cost of Equity

Table 4.2 WACC calculation

Beta	0.76
Risk-free (r _f)	1.71%
Equity risk premium (ERP)	7.63%
Cost of Equity; $r_e = r_f + Beta*ERP$	7.52%
Cost of Debt	
Cost of Debt	3.18%
Tax	20%
After-tax cost of debt $r_d*(1-Tax)$	2.54%
Weight of Equity	92.81%
Weight of Debt	7.19%
WACC; $W_e*r_e+W_d*r_d$	7.17%

4.1.3 Discounted cash flow valuation

Discounted cash flow valuation determines the present value of forecasted cash flow (2021 - 2025) and terminal value. When the terminal value is estimated beyond the explicit forecast period. I use perpetuity growth model to estimate terminal value.

Perpetuity growth model

$$TV = (Free \ Cash \ Flow \ x \ (1 + g)) / (WACC - g)$$

Where:

Free Cash Flow = FCF for the last twelve months

WACC = Weighted Average Cost of Capital

g = Perpetual growth rate (or sustainable growth rate)

The perpetual growth rate is 2.89% referring to Thai's GDP historical growth in last 7 years. (Appendix E) and terminal value is 61,587 million Baht.

Table 4.3 2021 Discounted cash flow valuation

Period			0	1	2	3	4	5	
	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	Terminal Value
EBIT	2,743	837	499	836	917	1,005	1,095	1,186	
Tax	553	140	86	158	174	192	210	230	
EBIT after tax	2,190	697	413	678	744	814	885	957	
Depreciation	777	2,137	1,667	1,787	1,907	2,037	2,167	2,310	
Working capital change	178	555	(80)	(51)	(12)	(13)	(14)	(14)	
CAPEX	(659)	(302)	(333)	(357)	(572)	(611)	(650)	(693)	
Free Cash flow to Firm			1,666	2,056	2,066	2,226	2,388	2,560	61,587
Discounted Cash flow			1,666	1,918	1,799	1,809	1,810	1,811	46,694
PV of Firm Value			57,508						
Net Debt			1,554						
PV of Equity		_	55,953	_					
No. of Shares (MN)		_	921	=					
Estimated Share Value as	end of 2021		60.76	baht per share					
Estimated Share Value as	end of 2022		65.34	baht per share					

M's operating income has been recovered and increased from 2020 – 2026 at CAGR 6.0%. but cannot reach pre-COVID level, the working capital change will drop year by year as assumed no big investment through this period new outlet. For capital expenditure (CAPEX) estimate as 15% of fixed asset for small investment and maintenance expenses. The free cash flow to firm increase relatively to operating

income. For terminal value calculate from 2.89% perpetual growth rate is 61,587 million Baht. All cash flow is discounted to present value at 7.17% WAAC discount rate. After the present firm value deduct net debt, the present value of equity is 55,953 million Baht and divide by the number of shares. The estimated per share value at 2021 is 60.76 Baht which is higher than latest M share price 50.75 Baht (as of 9 July 2021).

For 2022, target price estimation is calculated from the estimated 2021 target price with expected forward rate of cost of equity.

2022 target price = 2021 target price x (1 + cost of equity)
=
$$60.76 \times (1+7.52\%)$$

= 65.34

This can estimate 2022 target price which is 65.34 Baht per share.

4.1.4 The scale for the Rating

There are three scales of rating based on the difference between the latest market share price and the valuation target price as shown in Table 4.4

The recommendation is buy when the estimated price is 10% or more higher than the latest price. Sell is when the estimated price is 10% or loss than the latest price. And to hold when the estimated price is in between 10%v upside and 10% downside.

Table 4.4 Rating Criteria

Rating Rules	0 10 0
Buy	10% or Greater upside
Hold	Between 10% upside and 10% downside
Sell	10% or More downside

DFC estimated target share (60.76 Baht) is in upside that greater than the latest M share price (50.75 Baht) about 20%. Therefore, based on the DCF valuation analysis, the 2021 recommendation is to "BUY".

4.1.5 Sensitivity Analysis

The discounted cash flow valuation is driven by weighted average cost of capital (WACC) and perpetual growth rate. I simulate sensitivity analysis (Table 4.5) to provide wider range of share price on these two variable drivers.

The scenario for WACC and perpetual growth vary at $\pm 10\%$, $\pm 20\%$, $\pm 30\%$, $\pm 40\%$ and $\pm 50\%$ and range of share price within $\pm 10\%$ and $\pm 20\%$ are visible in green and yellow, respectively.

Table 4.5 2021 Estimated share price sensitivity analysis

		DCE		77				WACC					
		DCF	-50.0%	-40.0%	-30.0%	-20.0%	-10.0%	0.0%	10.0%	20.0%	30.0%	40.0%	50.0%
		60.76	3.7%	4.4%	5.1%	5.8%	6.6%	7.3%	8.0%	8.8%	9.5%	10.2%	11.0%
	-50%	1.4%	121.87	91.79	73.66	61.55	52.87	46.34	41.25	37.17	33.83	31.03	28.66
	-40%	1.7%	138.93	100.88	79.25	65.30	55.54	48.34	42.79	38.39	34.81	31.84	29.33
	-30%	2.0%	162.06	112.19	85.89	69.62	58.56	50.55	44.47	39.71	35.86	32.70	30.05
串	-20%	2.3%	195.16	126.68	93.89	74.65	61.99	53.02	46.33	41.14	37.01	33.63	30.81
Growth	-10%	2.6%	246.50	145.86	103.74	80.57	65.91	55.79	48.38	42.71	38.24	34.62	31.63
	0%	2.9%	336.85	172.48	116.15	87.66	70.45	58.93	50.66	44.44	39.59	35.69	32.50
Perpetual	10%	3.2%	537.90	211.90	132.27	96.28	75.77	62.50	53.21	46.35	41.06	36.86	33.44
Pe	20%	3.5%	1375.02	276.29	154.06	107.01	82.07	66.62	56.09	48.46	42.67	38.12	34.45
	30%	3.8%	n/a	400.33	185.16	120.71	89.67	71.40	59.36	50.81	44.44	39.49	35.54
	40%	4.0%	n/a	738.50	233.13	138.82	99.01	77.04	63.10	53.46	46.40	40.99	36.73
	50%	4.3%	n/a	5341.20	316.84	163.88	110.76	83.77	67.42	56.45	48.58	42.64	38.01

Target price ±10% Target price ±20%

For 2022 estimated share price, the key driver is cost of equity. I use sensitivity analysis to determine the cost of equity deviation at $\pm 10\%$, $\pm 20\%$, $\pm 30\%$, $\pm 40\%$ and $\pm 50\%$. The result shows in table 4.6

Table 4.6 2022 Estimated share price sensitivity analysis

Deviation	Cost of Equity	2022 share price
-50%	3.76%	63.05
-40%	4.51%	63.51
-30%	5.27%	63.97

Table 4.6 2022 Estimated share price sensitivity analysis (cont.)

Deviation	Cost of Equity	2022 share price
-20%	6.02%	64.42
-10%	6.77%	64.88
0%	7.52%	65.34
10%	8.28%	65.79
20%	9.03%	66.25
30%	9.78%	66.71
40%	10.53%	67.17
50%	11.29%	67.62

4.2 Valuation recommendation

The discounted cash flow valuation is analyzed by cover 5 years forecasted cash flow under assumption of business and perpetual growth and define both earning and cost of capital prospects to estimate M share price. The 2021 estimated share price is 60.76 Baht per share which greater than the latest share price and also in price range of last 52 weeks. In additional, the 2022 estimated share price further increase at 65.34 Baht per share. Share price comparison shows in table 4.7.

As 2021 estimate share price shows its position in greater upside and 2022 estimated value expected to increase in value, I recommend to "BUY" M stock.

Table 4.7 M share price comparison

Share price	Baht per share
Latest share price as of 9-Jul-2021	50.75
52 Week High/Low	60.25 / 43.75
DCF valuation	
2022 estimate share price	60.76
2022 estimate share price	65.34

CHAPTER V

INVESTMENT RISKS AND DOWNSIDE POSSIBILITIES

MK Restaurant Group Public Company Limited (M)'s risk assessment and downside possibility is assessed to realize a various of business, investment and market risks that could impact to future operation, business performance and share price.

5.1 Business Risk

For the type of business risks, there are 5 risks relating to M's business, which are

5.1.1 Competitive risk

The competition in restaurant increases over the decades due to the low barrier to enter. As a result, a various of companies include domestic and international restaurant chains jump into this industry. Although the competitive advantages such as brand reputation and economy of scale, M may loss some revenue and lower profit margin in order to compete with other challengers.

5.1.2 Volatility of raw material prices risk

Most of M's raw materials are fresh food such as meat, vegetable, fruit, rice, egg and seasoning. The market prices and quantities all the time according to demand and supply, season, natural disaster and diseases in plants and animals. Company could not raise the sales price to respond the hike in raw materials price due to high competitions and customers satisfaction. Since costs of food are the biggest portion. M try to minimize risk from swing of prices by estimate demands and as a huge volumes M can negotiate with manufacturers to get the products with reasonable prices on schedule. Moreover, M signed a future sales contract with clearly specific prices to

suppliers and regularly compare the raw materials as guide to hike sales price when it possible.

5.1.3 Opening a new branch risk.

New branch needs approximately 8 - 10 million Baht a branch investment. It costs for design, construction, mechanical & electricity (M&E) system, furniture, kitchen equipment, and other office equipment. M plans continuous new outlet expansion and risk will be on overlap outlets in nearby location. This could affect the sales and performances in the longer run. M takes into consideration sales amounts of nearby branches and population density in the same area to ensure that a new entrant will not affect the business of existing branch.

5.1.4 Risk from COVID-19 Outbreak

Since first spreading in March 2020, M's operations were also adversely affected by government restrictions on lock down, limited operating hours and limiting dine-in capacity. M changed operational activities tended to safeguard employees and customers in response to COVID-19, including increased cleaning and sanitization, installation of counter screens and purchasing protective equipment, which resulted in the increase of restaurant operating costs and reduced restaurant-level margins. In 2021, new wave has been spiked and continued spread. It is expected that COVID-19 impact to business and results of operations.

5.1.5 Risks from natural disasters and accidents

M has realized the effect of natural disaster to business and has planned protective measures to handle the risk. This includes buying casualty insurance, formulating an emergency operation plan, training staff to handle natural disaster incidents, building a new central kitchen at an ideal site, adding a distribution center to its portfolio to diversify risk and communicating with all parties. The communication convinces and boost confidence of shareholders, employees, suppliers, and customers that M can handle and return the business to normalcy as quickly as possible. In additionally M has taken out several types of casualty insurance policies such as

accident insurance, third-party liability insurance, and property insurance to make itself ready for future incidents.

5.2 Investment Risk

5.2.1 Liquidity Risk

Trading volume relatively low, an event that occur in market can lead to more fluctuation of price due to low trading liquidity.

Date	Open	High	Low	Average Price	Close	Change	% Change	Volume (x1000)	Value (MB.)	SET Index	% Change
15/07/21	51.25	51.75	51.00	51.40	51.75	0.75	1.47	763.38	39.24	1,572.01	0.15
14/07/21	52.00	52.00	50.75	51.01	51.00	-0.75	-1.45	1,254.24	63.98	1,569.70	-0.08
13/07/21	51.75	52.00	51.50	51.88	51.75	0.00	0.00	748.93	38.85	1,570.99	1.36
12/07/21	51.25	51.75	51.00	51.45	51.75	1.00	1.97	464.29	23.89	1,549.84	-0.14
09/07/21	50.25	51.50	50.25	50.92	50.75	0.50	1.00	1,425.63	72.59	1,552.09	0.55
08/07/21	50.50	51.50	50.25	50.60	50.25	-0.25	-0.50	4,023.33	203.57	1,543.67	-2.09
07/07/21	52.25	52.25	50.50	51.15	50.50	-1.50	-2.88	2,404.81	123.01	1,576.60	-0.93
06/07/21	51.50	52.25	51.50	51.91	52.00	0.75	1.46	609.99	31.67	1,591.43	0.77
05/07/21	52.25	52.25	51.25	51.53	51.25	-0.50	-0.97	603.97	31.12	1,579.28	0.05
02/07/21	52.00	52.00	51.50	51.68	51.75	-0.50	-0.96	844.82	43.66	1,578.49	-0.96
01/07/21	52.25	52.50	51.50	51.95	52.25	0.00	0.00	1,587.84	82.49	1,593.75	0.38
30/06/21	53.00	53.00	52.25	52.59	52.25	-0.50	-0.95	490.24	25.78	1,587.79	-0.23
29/06/21	53.25	53.75	52.50	52.86	52.75	-1.00	-1.86	900.49	47.60	1,591.43	0.78
28/06/21	52.00	54.00	51.25	52.59	53.75	1.25	2.38	2,534.20	133.28	1,579.17	-0.22
25/06/21	53.75	54.00	52.50	52.98	52.50	-1.25	-2.33	1,476.76	78.24	1,582.67	-0.19

Figure 5.1 M Trading History

Source: Settrade

CHAPTER VI CONCLUSIONS

In this thematic paper, MK Restaurant Group Public Company Limited is evaluated by discounted cash flow valuation method to evaluate the target price. This method defines the intrinsic value of M by cover 5 years-forecasted cash flow under business condition and perpetual growth.

From the analysis, the driven factors of M's share price are incremental operating income from sales growth, cost of capital and perpetual growth. The sales growth directly relates to business and economic situation. The cost of capital, as interest bearing debt is only lease liabilities which all interest rates are fixed. Then cost of equity is the crucial influencer. The perpetual growth of M is correlate with Thailand economic growth as over 90% of total revenues are from domestic sales.

The cash flow prospected operating income growth during and after COVID at 6.0% CAGR (2020-2026), 7.30% of weighted average cost of capital and perpetual growth at 2.89%. The share price result is 58.93 Baht per share and 63.45 Baht per share in the end of 2021 and 2022, respectively.

Those driven factors have been run the sensitivity analysis to observe share price deviation in range up to $\pm 50\%$. Also, I compare the estimated share price with last 52 weeks price to examine its price position. All shows the latest price (as of 9 July 2021) at 50.75 Baht per share is undervalued and 2021 DCF target price is in great upside for 16%. And 2022 DCF target price tend to be more value. Therefore, my conclusion is recommended to "BUY".

6.1 Triggers for re-assessment

The key driven factors of discounted cash flow valuation are sales growth, cost of capital and perpetual growth. Thus, these factors are the trigger to revaluation.

The sales growth consequently affects from sales and service revenues. As COVID-19 new wave spread is not yet predicted and governance keeps social restriction. This situation will negatively affect to restaurant profit and share price drop. Cost of capital especially cost of equity when shareholder expect the higher return. Cost of debt, as M has only lease liabilities with fixed interest then it may require to re-assess when M issue new debt.

Perpetual growth use as terminal growth. It needs to reconsider when M has more diversification in other products or new business field.

6.2 Limitations

The discounted cash flow is forecast based on many assumptions. Any overestimated or underestimated assumption may lead to wrong valuation. Especially in cost of equity even the theoretically compute from beta, risk free rate and market risk premium but each parameter hardly to exactly determine. Also, almost number came from historical data which cannot reflect today's uncertain time.

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Appendix A: Competition Analysis (Five force)

The five forces analysis of M that we analyzed.

High threat of new entrance, opening a new restaurant doesn't cost much, so new competitors can easily come to the food industry. Even Though newcomers can enter the market, they have to build up their new brand and compete with a very smaller size. However, operators in this industry should always beware and adapt with new players.

High threat of substitutes, as majority branches of MK restaurant operate in department stores so there are many restaurants around MK so it is easier for customers to change the restaurant.

High bargaining power of suppliers, there are two parts of M suppliers. First is raw material supplier, majority in this part is from fresh food which has a high number of suppliers. M can change if they are dissatisfied about quality or price. Second part is renters in department stores, with a limit of space in shopping malls and prices are differentiated by area M has less bargaining power to the renters.

Low bargaining power of customers, with a strong brand reputation and reliable taste make customers have less bargaining power. Furthermore, as they open restaurants in department stores so customers can not bargain with M.

Low rivalry among current competitors, food business has a strong competition among competitors with low loyalty people can switch easily. But for the suki chain for now there are low rivalry in Thailand as M majority operate in this country.

Appendix B: Financial Analysis

Table B-1 Dupont analysis of ROE

			M	ZEN	Haidi lao	Xiabu xiabu		
DUPONT Analysis	2016	2017	2018	2019	2020	2020	2020	2020
Revenue (MNTH)	15,146	16,073	16,770	17,409	13,361	2,284	129,763	24,739
Net Profit Margin	13.9%	15.1%	15.4%	15.0%	6.8%	-2.8%	1.1%	0.2%
Asset Turnover	0.97	0.99	0.98	0.97	0.66	0.85	1.02	0.93
Equity multiplier	1.17	1.18	1.21	1.25	1.51	2.22	2.69	2.49
ROE by Dupont	15.7%	17.5%	18.2%	18.2%	6.7%	-5.3%	3.0%	0.5%

Table B-2 Financial Profitability

			M	ZEN	Haidi lao	Xiabu xiabu		
	2016	2017	2018	2019	2020	2020	2020	2020
Gross Profit Margin	67.3%	67.8%	68.4%	68.5%	65.7%	46.2%	46.6%	42.5%
Operating margin	17.2%	18.6%	18.7%	17.7%	8.2%	-2.2%	4.2%	0.5%
Net Profit Margin	14.6%	15.8%	16.1%	15.0%	6.8%	-2.8%	1.2%	0.2%

Table B-3 Working capital Analysis

			M	ZEN	Haidi lao	Xiabu xiabu		
	2016	2017	2018	2019	2020	2020	2020	2020
AC Receivable Days	3	2	2	3	4	15	16	24
Inventory Days	22	24	23	23	31	27	28	84
AC Payable Days	106	110	123	127	126	70	53	40
Cash Cycle	-81	-84	-98	-101	-92	-28	-9	68

Table B-4 Financial Liquidity

	M					ZEN	Haidi lao	Xiabu xiabu
	2016	2017	2018	2019	2020	2020	2020	2020
Current Ratio	5.36	5.02	4.21	3.54	2.92	4.75	2.79	1.12
Quick Ratio	5.19	4.85	4.08	3.40	2.77	2.77	2.77	2.77
Working Capital to Total Assets	0.54	0.52	0.47	0.35	0.27	0.27	0.27	0.27
Cash ratio	0.17	0.19	0.29	0.33	0.18	0.47	0.01	0.55
Operating cash flow ratio	1.59	1.70	1.48	1.39	0.74	-0.08	0.29	0.63

1.592405

Durbin-Watson

-0.109989

rho

2014 - 20192014 - 2020GDP per capita Vs M revenues (2014 - 2020) GDP per capita Vs M revenues (2014-2019) 25,000 y = 0.0488x + 4192.6 y = 0.0596x + 2149.5 R² = 0.9825 2018 2019 15,000 15,000 2020 10,000 150,000 150,000 GDP per Capita GDP per Capita Model 1: OLS, using observations 2014-2020 (T = 7) Model 2: OLS, using observations 2014-2019 (T = 6) Dependent variable: MKrevenue Dependent variable: MKrevenue Std. Error Coefficient Std. Error const 4192 59 5951.83 0.7044 0.5126 const 2149.50 909,958 2.362 0.0775 GDPperCapita 0.0488325 0.0258816 0.1178 0.0595581 0.00397812 1.887 **GDPperCapita** 14.97 0.0001 15727.95 Mean dependent var 15389.81 S.D. dependent var 1429.588 Mean dependent var S.D. dependent var 1221.493 Sum squared resid 7162668 S.E. of regression 1196.885 Sum squared resid 130799.0 S.E. of regression 180.8307 R-squared 0.415880 Adjusted R-squared 0.299056 R-squared 0.982467 Adjusted R-squared 0.978084 P-value(F) F(1, 5) 3.559886 0.117848 F(1, 4) 224,1433 P-value(F) 0.000116 Log-likelihood 120.7345 Log-likelihood -38.48260 80.96521 -58.36726 Akaike criterion Akaike criterion Schwarz criterion 120.6263 Hannan-Quinn 119.3974 Schwarz criterion 80.54873 Hannan-Quinn 79.29800

Appendix C: Sales forecast

-0.882499

Figure C-1 GDP per capita and M revenues linear regression model

1.496993

Durbin-Watson



	2016	2017	2018	2019	2020
Revenue	15,146	16,073	16,770	17,409	13,361
COGS	4,952	5,174	5,295	5,483	4,577
SG&A (& Other)	7,943	8,299	8,806	9,183	7,947
Selling and distribution expenses	6,942	7,219	7,669	7,902	6,766
Administrative expenses	1,001	1,080	1,137	1,281	1,181

Figure C-2 M Expenses Forecasting

Appendix D: Capital Asset Pricing Model (CAPM)

Model 1: OLS, using observations 2016-08-08:2021-08-06 (T = 1214)

Missing or incomplete observations dropped: 5

Dependent variable: Mreturn

	Coefficient	Std. Error	t-ratio	p-value	
const	-8.21723e-05	0.000413496	-0.1987	0.8425	
SETTRIreturn	0.762073	0.0393826	19.35	< 0.0001	***
Mean dependent var	5.65e-0	6 S.D	. dependent var	0.016	5475
Sum squared resid	0.25154	3 S.E	of regression	0.014	1406
R-squared	0.23602	26 Adj	usted R-squared	0.235	395
F(1, 1212)	374.440)8 P-v	alue(F)	6.586	-73
Log-likelihood	3425.87	'1 Aka	aike criterion	-6847	7.743
Schwarz criterion	-6837.5	39 Har	nnan-Qui <mark>nn</mark>	-6843	3.901

Figure D-1 Beta estimation from liner regression model

Table D-2 M's Main shareholders

	List of shareholders	No. of shares held	%
1.	Mrs. Yupin Thirakomen	182,396,802	19.8
2.	Mr. Somchai Hanjitkasem ⁽¹⁾	147,494,812	16.0
3.	Mr. Rit Thirakomen ⁽²⁾	123,059,333	13.4
4.	Mrs. Aumporn Hanjitkasem	82,403,989	8.9
5.	Mr. Varakorn Hanjitkasem	41,039,694	4.5
6.	Ms. Varaporn Hanjitkasem	41,031,994	4.5
7.	Aunt Thongkam MK Foundation ⁽³⁾	31,265,983	3.4
8.	Bualuang Long-term Equity Fund	23,242,400	2.5
9.	Social Security Office	17,731,000	1.9
10.	Bualuang Long-term Equity Fund 75/25	12,304,800	1.3

Remark: Data as of December 30, 2020

- 1. Mr. Somchai Hanjitkasem is a brother of Mrs. Yupin Thirakomen.
- 2. Mr. Rit Thirakomen is a spouse of Mrs. Yupin Thirakomen.
- 3. Aunt Thongkam MK Foundation was founded by Mrs. Yupin Thirakomen and Mr. Somchai Hanjitkasem, a daughter and a son of Mrs. Thongkam Mekto. Mrs. Yupin

Thirakomen and Mr. Somchai Hanjitkasem are the chairman and vice chairman of Aunt Thongkam MK Foundation respectively.



Appendix E: Thai's GDP historical growth

Table E-1 Thai's GDP historical growth (2014 - 2020)

	0	1	2	3	4	5	6	CAGR
Year	2014	2015	2016	2017	2018	2019	2020	2014-2020
GDP (BT BN)	13,230	13,743	14,590	15,489	16,369	6,898	15,698	
		3.9%	6.2%	6.2%	5.7%	3.2%	-7.1%	2.89%

Source: Office of The National Economic and Social Development Council, 2021

