DISCOUNTED CASH FLOW VALUATION OF AP (THAILAND) PUBLIC COMPANY LIMITED



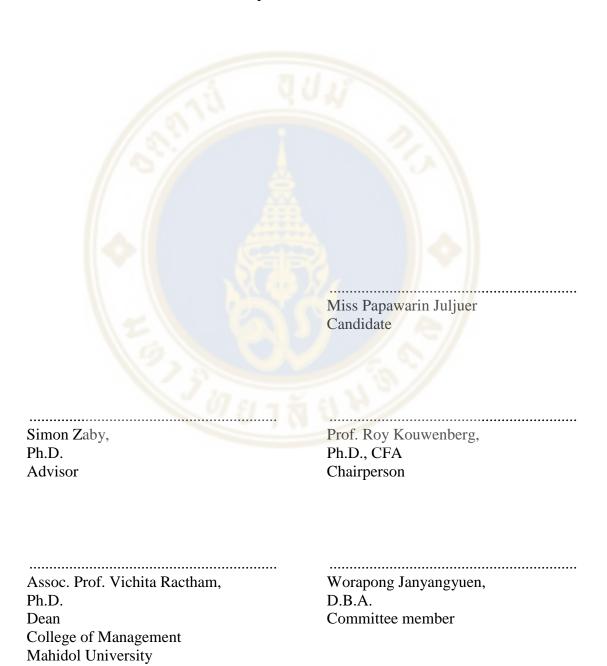
A THEMATIC PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MANAGEMENT COLLEGE OF MANAGEMENT MAHIDOL UNIVERSITY 2021

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Papawarin Juljuer

DISCOUNTED CASH FLOW VALUATION OF AP (THAILAND) PUBLIC COMPANY LIMITED

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M.M. (CORPORATE FINANCE)

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ABSTRACT

AP (Thailand) Public Company Limited (AP) is a property development in the category of detached houses, townhouses, and condominiums. It was founded by Mr. Anuphong Assavabhokhin and Mr. Pichet Vipavasuphakorn as major shareholders in 1991. The mission is to be the most responsive creator for our customers. There are three key strategies to drive an organization consisting of independent responsible leaders, innovative culture and everything digital.

The valuation method that is selected in this paper is Discounted Cash Flow (DCF). The concept is to estimate the company value based on expected free cash flows in the future and discount back to present value. The sales from real estate rise by 6.07 CAGR from 2021-2025. While the net profit growth by 2.67% CAGR. The weighted average cost of capital (WACC) is 8.54% and terminal growth is 1.374% from the average inflation rate in 2021-2025. Therefore, the price is 9.40 baht per share with current upside 15% compared to the current stock 8.20 baht as of 14 July 2021. I would like to recommend "BUY".

KEY WORDS: AP/ DISCOUNTED CASH FLOW/ Real Estate/ Property Developer/ VALUATION

35 pages

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LIST OF ABBREVIATIONS

AP AP (Thailand) Public Company Limited

BV Book Value

CAGR Compound Annual Growth Rate

CAPEX Capital Expenditure

CAPM Capital Asset Pricing Model

COGS Cost of Goods Sold

DCF Discounted Cash Flow

EPS Earnings per Share

EBIT Earnings before Interest and Taxes

EBITDA Earnings before Interest, Taxes and Depreciation

EV Enterprise Value

FCFF Free Cash Flow to Firm

GDP Gross Domestic Production

JV Joint Venture

Kd Cost of Debt

Ke Cost of Equity

MRP Market Risk Premium

NPV Net Present Value

NOPAT Net Operating Profit after Taxes

NI Net Income

P/E Price to Earnings per Share

P/BV Price to Book Value

Rf Risk Free

ROE Return on Equity

SET Stock Exchange of Thailand

SG&A Selling, General and Administrative Expense

WACC Weighted Average Cost of Capital

LIST OF ABBREVIATIONS (cont.)

Wd Weight of Debt
We Weight of Equity



CHAPTER I INTRODUCTION



Figure 2.1 AP Logo

Source: AP Website

AP (Thailand) Public Company Limited (AP) is a real estate developer in the category of detached houses, townhouses, and condominiums. Each location focuses on urban areas or near the business center which is comfortable for everyday life and emphasizes the residential design to match customer's needs.

The company founded in 1991 by Mr. Anuphong Assavabhokhin and Mr. Pichet Vipavasuphakorn as major shareholders, later in the year 2000 was listed on the Stock Exchange of Thailand (SET), through a merger with the company Prefabricated Floor PCM Public Company Limited. After that it sold all shares in PCM Construction Material Company Limited in 2004 to make business type obviously. Nowaday, it is in the property development sector.

Main revenue comes from sales of real estates, which is 97 percent of total revenue. It can be divided into 2 parts; low rise revenue is 83 percent of sales from real estates and the rest is 17 percent from condominiums based on year 2020. The company has a clear policy that would like to grow sustainably in line with the current economic situation, thus focusing on real demand customers and emphasizing on continuous development of products and services.

CHAPTER II BUSINESS DESCRIPTION

2.1 Business Overview

AP Thailand is a property development business. The projects include townhouses, single-detached houses and condominiums. The single-detached houses under the brand of Palazzo, Baan Klang Krung, Soul, Classe, Centro, The City and Mind and the townhouses under the brand of District, Pleno, THE SONNE and Baan Klang Muang are focused on Bangkok and surrounding and central business district. Api Town is a new brand in the upcountry. For the single-detached houses and townhouses, the target group is a small family up to a large family. The condominiums under the brands of Vittorio, The Address, Rhythm, Life, Aspire and Coo which target customers are urban workers (Figure 2.1 AP Brand Product).



Figure 2.2 AP Brand Product

Source: AP annual report yearly 2020

The company has a wide variety of products to respond to various customer segments, making the AP brand one of the strongest brands in the property developer market. According to Table 2.1 Type of Brand Product, AP has a clear classification of customers with the brands and price.

Table 2.1 Type of Brand Product

Brand	Туре	Price range	Target clients
Baan Klang Krung	Townhouse, SDH	Baht 10 million+	35-50 years old
Baan Klang Muang	Townhouse	Baht 4-7 million	28-40 years old
Pleno	Townhouse	Baht 1.8-2.4 million	30-45 years old
BIZTOWN	Home Office	Baht 6 million+	35-50 years old
The Palazzo	SDH	Baht 12-35 million	35-55 years old
Soul	SDH	Baht 12-30 million	35-55 years old
Centro	SDH	Baht 5-8 million	30-45 years old
The City	SDH	Baht 8-15 million	35-55 years old
Galerie	Condominium	Baht 25-100 million	35-50 years old
The Address	Condominium	120,000 Baht/sq.m.+	30-55 years old
Rhythm	Condominium	90,000-120,000 Baht/sq.m.	25-45 years old
Life	Condominium	90,000 Baht/sq.m.	25-45 years old
Aspire	Condominium	48,000-82,000 Baht/sq.m.	23-35 years old
Coo	Condominium	Baht 1.2-1.5 million	23-35 years old

Source: AP annual report yearly 2020

According to the table 2.2 revenue structure, revenue from property development business is the main income source, which is approximately 93 percent in 2019 (Figure 2.2 Revenue Breakdown 2019) and increase to 97 percent of the total in 2020 (Figure 2.3 Revenue Breakdown 2020) following the GDP in real estate sector (Figure 2.4 GDP contribution in real estate sector). The proportion of low-rise income rose significantly from 75.7 percent to 80.2 percent, and the proportion of high-rise income dropped from 17.6 percent to 16.4 percent, in line with the condominium market slowdown.

Table 2.2 Revenue Structure

(Unit: million Baht)

Bendert Francisco Communication	2020		2019		2018 (Restated)		
Product lines / Business Group	Revenue	%	Revenue	%	Revenue	%	
Revenue from property development business							
 Low-rise 	24,034.6	80.2	18,144.6	75.7	17,521.4	64.	
High-rise	4,914.4	16.4	4,227.2	17.6	8,678.7	31.	
 Land sales 	_	-	307.0	1.3	-		
Total revenue from property development business	28,949.0	96.6	22,678.8	94.6	26,200.1	95.	
 Revenue from management and service fee 	939.4	3.2	1,123.4	4.7	1,070.6	3.	
Other revenue	70.1	0.2	164.5	0.7	64.4	0.	
Grand total	29,958.5	100.0	23,966.7	100.0	27,335.1	100.	

Source: AP annual report yearly 2020

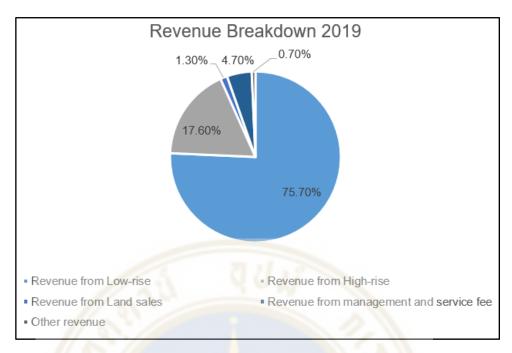


Figure 2.3 Revenue Breakdown 2019

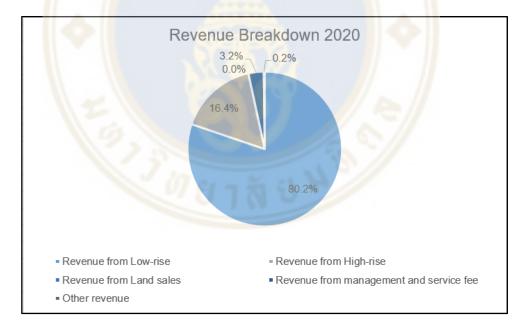


Figure 2.4 Revenue Breakdown 2020

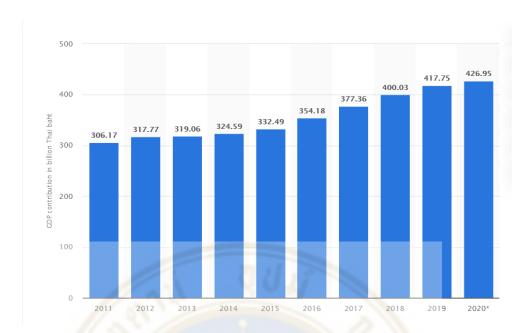


Figure 2.5 GDP contribution in real estate sector

Source: www.statista.com

2.2 Strategies

There are 3 key strategies to drive an organization which has begun to take action with employees at all levels since 2017 consist of independent responsible leaders, innovative culture and everything digital (source: AP annual report yearly 2020).

Firstly, independent responsible leaders increase more competition chances under the framework of responsibility to themselves, customers, vendors and co-worker. The operation focuses on the customer's needs more than the company's requirements. As for the condominium market demand has started to slow down since 2019, both in the part of real demand that was bought for living and in the part of investors. Likewise, purchasing power from foreign countries has also declined, especially purchasing power from China. As a result, the company shifted its strategy to concentrate with real demand from low-rise residents, as evidenced by the increased proportion of low-rise housing revenue to serve customer's needs.

Secondly, innovative culture builds a corporate culture with a DESIGN THINKING system that integrates creative thinking and business thinking for new thing

development via YourNextU. This method extends the knowledge and uses it to increase the product design efficiency for customer's needs as much as possible, these processes to ensure that the company has sufficient executives and employees for future business expansion.

Lastly, everything digital supports rapid technology changes. Due to the outbreak of the Covid-19, new-normal lifestyles are expected into permanent behaviors such as reliance on online spending and working from home is spending more time, companies adapt strategies for new lifestyles.

2.3 Management

"EMPOWER LIVING" is the AP's vision. It builds and provides products and services to customers that help people to live a good life in their way. The mission is being an organization that understands unmet customer needs and quickly responds to their needs. The objectives and long-term goals are considered by the vision and mission to create substantial corporate objectives.

The management of AP is led by Mr. Anuphong Assavabhokhin as vice chairman (Table 2.3 Board of Directors) and chief executive officer. He is a major shareholder with the highest number of shares. The other one is Mr. Pichet Vipavasuphakorn as a managing director. Mr. Pichet and his spouse are also a major shareholder of AP (Table 2.4 Major Shareholders).

Table 2.3 Board of Directors

	Di	rector	Position	Independent director	Executive director	IOD training course
1.	Assoc. Prof. Dr	. Naris Chaiyasoot	Chairman of the board	/	-	/
2.	Mr. Anuphong	Assavabhokhin	Vice chairman/Chief executive officer	-	/	/
3.	Mr. Pichet	Vipavasuphakom	Director/Managing director	-	/	/
4.	Mr. Siripong	Sombutsiri	Director	-	1	/
5.	Mr. Phanporn	Dabbaransi	Chairman of audit committee	/	-	/
6.	Mr. Nontachit	Tulayanonda	Audit committee member	/	-	/
7.	Mr. Kosol	Suriyapom	Audit committee member	/	-	/
8.	Mr. Somyod	Suteerapornchai	Audit committee member	/	-	/
9.	Mr. Yokpom	Tantisawetrat	Director	1	-	/
10.	Mr. Pomwut	Sarasin	Director	1	-	/
11.	Ms. Kittiya	Pongpujaneegul	Director		1	1
12.	Mr. Visanu	Suchatlumpong	Director	- A	1	/
13.	Mr. Wason	Naruenatpaisan	Director		1	/

Source: AP Annual Report yearly 2020

Table 2.4 Major Shareholders

No.	Name of the shareholder	No. of shares	Percentage
T	Mr. Anuphong Assavabhokhin	670,047,561	21.30
2	That NVDR Co., Ltd.	343,241,891	10.91
3	NORTRUST NOMINEES LIMITED-THE NORTHERN TRUST COMPANY RE IEDU UCITS CLIENTS 10 PCT ACCOUNT	191,743,715	6.10
4	State Street Europe Limited	107,434,645	3.42
5	Mr. Pichet Vipavasuphakorn*	88,282,879	2.81
6	The Bank of New York Mellon	82,760,030	2.63
7	Krungsri LTF Dividend Stock	73,135,100	2.32
8	South East Asia UK (Type C) Nominees Limited	72,977,064	2.32
9	Mr. Jaroonsak Bantoonrajinda	66,919,000	2.13
10	Mr. Chanchai Krairitthichai	62,000,060	1.97

Source: AP Annual Report yearly 2020

This figure shows the company structure, the board of directors is a group of people who establish and support the implementation of the management policy instead of shareholders.



Figure 2.6 Organizational Chart

Source: AP Annual Report yearly 2020

2.4 Corporate Governance

AP (Thailand) get the highest CG score (Figure 2.6 AP Corporate Governance) due to operates its business with integrity, honesty, transparency, fairness and compliance with the law and accountability to society, including all stakeholders in accordance with the principles of good corporate governance, which is the basis of sustainable growth (Source: AP Thailand annual report).



Figure 2.7 AP Corporate Governance

Source: https://market.sec.or.th/

The companies that get the same score consist of many leading companies such as AIS, BDMS, BEM (Figure 2.7 AP with Excellent CG Scoring).

Companies with Excellent CG Scoring



by alphabetical order

ข้อมูล ณ วันที่ 19 พฤศจิกายน 2563

No	Symbol		Public Company Limited	No	Symbol		Public Company Limited
1	AAV	ASIA AVIATION	ASIA AVIATION	21	BCPG	bcpg	BCPG
2	ADVANC	AIS	ADVANCED INFO SERVICE	22	BDMS	COMS Depte that before tweet	BANGKOK DUSIT MEDICAL SERVICES
3	AF	AiRA	AIRA FACTORING	23	BEC	BEC	BEC WORLD
4	AIRA	AiRA	AIRA CAPITAL	24	BEM	BEM	BANGKOK EXPRESSWAY AND MET- RO
5	АКР	ph. Array 100.000	AKKHIE PRAKARN	25	BGRIM	B.GRIMM BINGE 1878	B.GRIMM POWER
6	AKR	EKARAT	EKARAT ENGINEERING	26	BIZ	B A	BUSINESS ALIGNMENT
7	ALT	ALT	ALT TELECOM	27	ВКІ	e nşumwds-rilurin Banglick insurance	BANGKOK INSURANCE
8	AMA	AMA MARINI	AMA MARINE	28	BLA	 กรุงเทพประกับชีวิต 	BANGKOK LIFE ASSURANCE
9	AMATA	AMATA POSTORAL TODA AMERICA	AMATA CORPORATION	29	BOL	Commen	BUSINESS ONLINE
10	AMATAV	AMATA	AMATA VN	30	ВРР	BANPU	BANPU POWER
11	ANAN	ANANDA	ANANDA DEVELOPMENT	31	BRR	@BRR	BURIRAM SUGAR
12	АОТ	AOT	AIRPORTS OF THAILAND	32	BTS	X	BTS GROUP HOLDINGS
13	AP	ΛP	AP (THAILAND)	33	BWG	BWG	BETTER WORLD GREEN
14	ARIP	arip	ARIP	34	CENTEL	CENTARA	CENTRAL PLAZA HOTEL

Figure 2.8 AP with Excellent CG Scoring

Source: http://www.thai-iod.com/

CHAPTER III INDUSTRY OUTLOOK

3.1 Macroeconomic Analysis

The world and Thailand GDP

The global economy is expected to grow 6 percent in 2021 and 4.9 percent in 2022 after falling 3.2 percent in 2020 due to the COVID-19 pandemic (Source: World Economic Outlook Update, July 2021). While Thailand GDP contracted in 2020 at 6.4 percent, the lowest in 22 years. It is forecast to grow at 2.2 percent annually in 2021, down from previously projected 3.4 percent (Figure 3.1 Thailand GDP).

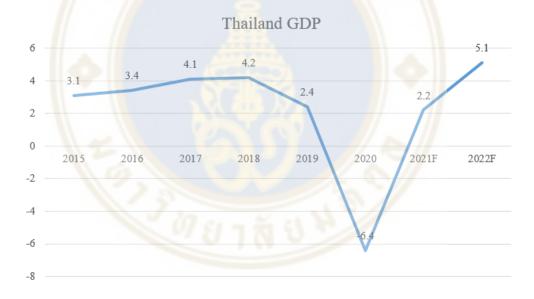


Figure 3.1 Thailand GDP

The negative factors affecting the GDP change come from the impact of the new wave of Covid-19 outbreak at the end of the second quarter of 2021 and reducing the number of tourists forecast. However, it is still driven by exports that tend to expand in line with economic recovery and world trade volumes, and economic stimulus measures, which would help domestic spending to continue to recover. For example, reducing people's cost of living to stimulate consumption, state enterprise investment

budgets, especially infrastructure investment projects, and other financial measures include low-interest loans to help entrepreneurs that were affected by the COVID-19 epidemic. GDP growth will be 5.1% in 2022 due to accelerating economic recovery, but the outlook is unsure.

The real estate business was sluggish due to the pandemic. Developers delayed the launch of new projects as purchasing power in the country and foreigners has decreased, resulting in the oversupply in the market especially of condominiums. Real demand customers will stimulate the property market rather than speculative investors.

Thailand Unemployment rate and Household Debt

Due to the prolonged outbreak, the unemployment rate of Thai people increased by 1.96 percent (Figure 3.2 Unemployment rate) compared to the previous quarter, or about 760,000 people. At the same time, working hours have also decreased. Salaries, bonuses and OT wages also contracted significantly by 8.8 percent from the same period last year. This was a contraction in all major non-agribusiness sectors. These things in the labor market will continue to affect income and household confidence.



Figure 3.2 Unemployment Rate

Source: https://tradingeconomics.com/thailand/unemployment-rate

The household debt to GDP ratio in 2020 rose to 89.3%, compared with 78.4% per GDP and 79.8% per GDP in 2018 and 2019 respectively, as household debt continued to grow even during the period Thai economy contracted by the Covid-19 crisis (Figure 3.3 Household debt to GDP ratio). As the debt growth dimension in 2020, household debt outstanding rose only 3.9%, the lowest growth rate in 4 years and decreased from 5.1% growth in 2019, reflecting both borrowers and lenders are becoming more cautious in making financial transactions. In the first quarter of 2021, the ratio of household debt to GDP in Thailand is expected to increase in line with the shrinking GDP. While incomes did not recover immediately, the debt overhang is a major obstacle to Thailand's economic growth going forward.



Figure 3.3 Household Debt to GDP Ratio

Source: https://www.ceicdata.com/en/

Kasikorn research center can divide the objectives of borrowing into 2 groups. The first group is borrowing from households to purchase real estate, residential and cars which are a group with medium to high purchasing power and income is not affected much by the Covid situation. The second group is a group of households that need to borrow for liquidity and working capital for business operations, which is a group with unstable incomes. Therefore, the first group is the developer's target to stimulate sale and inventory liquidity by promotion and special campaign launching.

3.2 Industry Analysis

The overall residence market in Bangkok and its vicinities in the first half of the year was severely affected by the COVID-19 epidemic, resulting in a decline of new projects launched for sale as developers postpone the launch of new projects and accelerate the release of outstanding stocks through various sales strategies such as overthe-counter discounts, etc.

For the whole of 2020, the residential market continued to contract sharply from 2019 as a result of domestic purchasing power tending to stagnate in line with economic conditions, purchasing power for the high rise from foreign customers decelerating in line with the global recession, LTV criteria still strict onwards and the accumulated oversupply was high in many areas.

The residential market in Bangkok and its vicinity over the next three years from 2021 to 2023 is likely to improve. Supporting factors from the economy that is expected to gradually recover is the acceleration of mega projects as well as foreign investment. However, the high residual supply remains a depressing factor for growth.

The developers have increased the proportion of low-rise houses to maintain profit margins of the business and support the real demand for housing that is likely to grow continuously due to the demand growth from the new normal trend, which has attracted buyers to focus on living space and functions that are more conducive to working at home. For the supply side, they choose to open a low-rise project because the project development model can be phased in the metropolitan area where the land price is not as high as the city center. Moreover, the expansion of mass transit routes helps to create commercial value for the land surrounding the project. It is an opportunity for developers to invest in new projects in the suburbs and gain more profit.

Condominiums are expected to improve in some areas, especially in the city center and some BTS lines. Although the overall new supply of condominiums slows down considerably in 2020.

However, the income of large developers will continue to grow. Meanwhile, small-medium business developers will face intense competition in terms of sales and prices of land that are scarce and expensive.

3.3 Competition Analysis

AP's main competitors in Thailand are Sansiri, Quality Houses, LH, LPN, Pruksa and Supalai. AP has other competitors outside Thailand, which are 8990 Holdings in the Philippines and UOA Development in Malaysia. Competitors are chosen from companies that are in the same industry and have similar core businesses, in addition to being similar in size of market capitalization. If you look at the Figure 3.4 below, it can be seen that LH has the highest market capitalization and LPN has the lowest market capitalization. Other companies will have similar market capitalization.



Figure 3.4 Market Capitalization (Million Baht)

Sansiri Public Company Limited (SIRI) is the property development company. The company's core business includes property development, property services, and international investment. For property development business, it consists of for sale includes landed property and high-rise property and for rent includes office buildings and leasehold commercial building.

Quality Houses Public Company Limited (QH) is the company which engages in the residential property development. The company's core business includes sales of land, houses and condominiums, and residential and commercial buildings.

Land and Houses Public Company Limited (LH) is the property development company. LH develops and operates two business segments which are real estate business focusing on the residential development, and rental and service business segment. LH develops detached houses, duplex houses, townhouses, flats, and condominiums in Bangkok and surrounding areas.

LPN Development Public Company Limited (LPN) is the company which engages in the real estate development. The company's core business is to provide products and services for real estate development and real estate management services. The LPN's target group is the middle to lower-middle class, so LPN is the developer of residential condominiums with affordable prices.

Pruksa Holding Public Company Limited (PSH) invests in Pruksa Real Estate Public Company Limited. The company's core business operating in the property development business. PSH develops commercial buildings and residential housing, which are single-detached houses, townhouses, and condominiums.

Supalai Public Company Limited (SPALI) is the company which operates and develops real estate projects. The projects include detached houses, duplex houses, townhouses, and condominiums. Also, including office buildings for rent. SPALI operates in two segments which are real estate business and hotel business.

8990 Holdings, Inc. (HOUSE) divides its operations into two segments which are the construction of low-cost housing, medium-rise condominiums and high-rise condominiums, and hotel operation.

UOA Development (UOAD) has two business segments, real estate development and construction. UOAD focuses on property development on land and construction contracts. The company also operates through its affiliates such as managing and operating hotels and serviced apartments.

AP - Five forces Analysis

Power of Customers: High

In the current competitive situation, the market has an oversupply. This gives customers quite a lot of bargaining power. Customers with high purchasing power have a lot of bargaining power and have a lot of choice in terms of location and price.

Power of Suppliers: Low

Suppliers have very little bargaining power in an economic situation, which is an oversupply of inventories causing developers to choose to postpone the construction of some projects. When construction demand is low, suppliers have less bargaining power.

Threat of New Entrants: Low

Although new small developers have jumped into the business, the smaller developers are at a disadvantage on consumer trust and the company's reputation. The large developers also slow down investments in new projects as well, causing fewer new entrants.

Threat of Substitutes: Medium

Some people choose to wait and see the situation, so they still have not decided to buy a residence, so they choose to rent instead of buying a property.

Industry Rivalry: High

Oversupply makes price competition war in order to drain the backlog of products. The developer has made a promotion to speed up the product release.

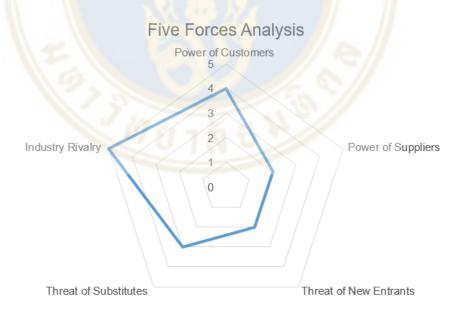


Figure 3.5 AP Five Forces Analysis

AP - SWOT Analysis

Strengths

- Strong brand image: AP is well known as a single-detached house, townhouses and condominiums brands that customers are familiar with, such as condominiums brands under the brand name "Life" and "Aspire" or a single-detached house brand as "Centro"
- Variety of products: There are various products to respond to the needs of various customers.
- Best location: AP focuses its vertical residential projects to be constructed within the range of BTS stations and its horizontal residential projects in the suburban area.
- Online Marketing: AP prefers to advertise via online platforms, so customers can access the projects' information anywhere and anytime. AP recently launched its latest online platform called ONE CLICK NEW HOW to offer various services for its customers from visiting the model units to booking your future residence.

Weaknesses

- Liquidity Risk: The construction of the house was completed before the sale. Therefore, the company requires a large amount of working capital and the company is at risk if it is unable to sell the completed house.
- High Cost: The company is still unable to produce all construction materials by itself, which makes it costly to purchase construction materials from vendors.

Opportunities

- Rail transport expansion: The expansion of public transport, both sky train and underground rail systems, gives the condominium business more opportunities for expansion.
- New Normal life: due to the COVID-19 epidemic, people's lifestyles have begun to change, such as Work from Home, causing people to start looking for a comfortable area to work and live.
- Measures to reduce the transfer and mortgage fees: The government has reduced transfer and mortgage fees to encourage people to buy property to stimulate the economy.

Treats

- Economic contraction: The country's economy is in recession, with GDP in 2020 shrinking 6.1 percent and household debt remains high. Therefore, consumer confidence is fragile, forcing people to be concerned about their purchasing power.
- International demand decline: Condominiums are allowed for foreigners to own, but the international demand dropped over the past one to two years, resulting in a relatively large supply of condominiums.
- Risk from the issuance of new rules: regulations and laws related to business operations, such as the new Land and Construction Tax Act.
 - The price of land: land in Bangkok is getting more expensive.



CHAPTER IV

INVESTMENT RISKS & DOWNSIDE POSSIBILITIES

Risk from global economic volatility

In 2020, the overall economic recession is the most severe due to the situation of the outbreak of the COVID-19 virus, affecting all sectors of the economy and society. Especially, property development business, which is directly linked to economic growth, leads to a decrease in purchasing power in the country and the disappearance of foreign customers, which affects the condominium business.

Therefore, the company has adopted a strategy by concentrating on customers who truly need to buy a residence for living. The company focuses on the development of residential projects in urban locations or near public transportation, by considering the types of real estate to suit the location and the customer needs under different brands, both types of residence and prices. In addition, AP Thailand has also expanded the project to the low-rise group in other provinces by focusing on large cities under the Api Town brand.

Risks from purchasing land for property development

Currently, the competition for land in the inner city of the right size and shape is quite competitive including more land problems. For example, the impact on the community during construction, etc., which affects the duration and cost of development is higher. To mitigate the risks, AP Thailand has an agency and committee with expertise in land appraisal and procurement to increase AP Thailand's access to attractive and competitive land in the future.

Risk from customer complaints and nearby communities in the construction area

Although the impact on the environment or the community has been assessed and planned before construction, there is a possibility that the construction may

disturb the residential community or the quality of products and services. After the construction, there may be some defects that create dissatisfaction. AP Thailand has a clear policy to take responsibility for this part in order to resolve the issue in a timely manner and to monitor any impacts. The Company provides communication channels for customer complaints, all complaints must be seriously resolved. The communication channels must be easily accessible. The company has set up a specialized unit to serve customers and to deal with the neighboring community if there is a complaint in order to recognize the problem and mitigate various impacts, including closely monitoring the situation and solving problems in time.

Risk from interest rate volatility and financing of investments to maintain liquidity

Although the global and domestic interest rates tend to decrease. However, the economic vulnerability and the increase in default on debts of the company. It may affect the financial cost for project development and operation. Therefore, financial planning and strategies must be adjusted to the current economic situation.

Risk from personnel development to support business growth

AP Thailand has introduced new technologies and innovations to drive business, but cannot prepare its personnel to be technologically proficient in time. This may lead to a long-term outcome in achieving the company's goals. The company focuses on developing employees' abilities both hard-side and soft-side through an application. Therefore, employees can learn 24 hours a day to ensure that AP Thailand will be able to expand business operations in the future.

Risk from new rules, regulations and laws related to business operations

The issuance of new rules, regulations or laws affecting the property developer business must be adjusted accordingly.

The imposition of Personal Data Protection Act B.E. 2562 which comes officially on June 1, 2021. Information is a type of asset that all entities use in business including the personal information of employees, applicants, vendors, and in particular,

customers. Without adequate management measures, there may be a risk of violating the Act. AP Thailand has set up a group and expert advisors to create security measures for the protection of personal data, data usage, storage and maintenance of information to not violate the law.

The changes in Land Tax and Building, which are effective in 2020. It affects the cost of developing a residential project in terms of vacant land assets or projects under development. The company has measures to support by adjusting its strategy to minimize inventories in developing projects and not hold the land ownership longer than necessary.

Risk from emerging epidemic diseases, nature and man-made disasters

The Covid-19 epidemic has resulted in the disruption of international travel and disappearance of tourists which is the main source of income. Foreign investors are restricted. If the epidemic situation is protracted, it may affect confidence in domestic consumption and slow down private investment. The unemployment trend is higher in the future. Another event was a political rally and the announcement of a curfew, the shutdown of both BTS and MRT, and the closure of road routes. The incident affected consumer and investor confidence, which influenced the country's economic recovery.

Risk from cyber threat and cyber security

Cyber threats and security risks are likely to increase and cause different kinds of impact. The company now recognizes the importance of using digital technology in its business operations to enhance design, project development, sales development, functional validation, and operational support, etc. This ensures accuracy, accuracy, speed and responsiveness to consumer behavior in the digital era. Increasing use of technology makes companies more vulnerable to cyber threats. Therefore, the company finds ways to prevent and mitigate the impact to control the risk of attack. The Company has implemented BCM which includes business continuity plan and data recovery plans. To avoid the situation in the case of cyber threats, the company also applies for cyber insurance to diversify risk and mitigate potential impacts. The company establishes policies related to the use of technologies such as IT security

systems and raises IT Awareness for their employees. The company also uses technology to detect anomalies to ensure adequate protection against cyberattacks.

Risk from changing consumer behavior in the New Normal era

Currently, many countries are entering an aging society. New lifestyles or New Normal lifestyles occur after the outbreak of the Covid-19 virus. These behaviors are expected to become permanently new behaviors. This includes online payments, ecommerce, delivery, and a higher proportion of people working from home.

The fact that one day working from home that has been imposed to prevent and mitigate the spread of COVID-19 may be reduced as the epidemic situation improves. When working from home is no longer popular, there may be a risk of affecting home demand.

Therefore, the company focuses on product and service development by taking into account the needs of the target group which varies by product type. Therefore, the project structure will be adjusted in line with the increasingly popular 'work from home' style. The company strives to improve its products and services to respond to changes all the time.

CHAPTER V VALUATION

5.1 Financial Analysis

In the property development sector, AP's main competitors are Land and Houses Public Company Limited (LH) and Supalai Public Company Limited (SPALI), which are larger than AP (Thailand) Public Company Limited compared with the market capitalization. LH's and SPALI's market capital are approximately 4 times and 2 times respectively.

For Dupont Analysis of ROE, AP had an average ROE of 15% in the past 6 years and more than LH and SPALI compared with the year 2020. Even though the both companies can get the better profit margin, they have the lower asset turnover that makes them get lower ROE. It is considered a highly profitable stock without the need for a large share of shareholders or simply call it a stock that generates good returns (Table 5.1 Dupont Analysis of ROE).

AP does well compared to larger companies in the revenue part, relatively close to LH and more than SPALI. However, compared to Net profit margin that AP can do. It indicates that the profitability is still inferior compared to the two companies, which shows that the cost management is not good enough. In the part of asset turnover, the company can use assets to generate sales very well, the average for 6 years, approximately 0.52 which is greater than the both. Equity multiplier measures the risk of raising funds from debt. The higher the Equity Multiplier, the higher the risk that makes the higher the expected return. For equity multipliers, AP and LH have a close number, higher than SPALI.

Table 5.1 DuPont Analysis of ROE

			LH	SPALI				
Million Baht	2015	2016	2017	2018	2019	2020	2020	2020
Total Revenue	22,398.00	20,447.56	22,349.36	27,335.11	23,966.66	29,958.50	30,965.09	20,969.29
Net Profit Margin	12.12%	13.75%	14.90%	15.09%	13.51%	14.60%	23.00%	20.64%
Asset Turnover	0.6	0.53	0.52	0.56	0.42	0.49	0.26	0.33
Equity Multiplier	2.14	1.99	1.99	2.02	2.13	2.12	2.33	1.69
ROE By Dupont	15.66%	14.58%	15.34%	17.14%	12.07%	15.21%	13.96%	11.54%

Figure 5.1 ROE Formula

Source: https://learn.lif.co.id/45913/

This part is growth analysis that is used for forecasting revenue in the future. I use historical data from 2015-2020 to calculate CAGR (Table 5.2 Growth analysis of AP, LH and SPALI).

Firstly, AP revenue has a 5.99% CAGR greater than the competitors, but expense increased higher than revenue with a 7.49% CAGR. It means AP cannot manage expenses very well. However, net income still has satisfactory growth, which is 10% CAGR. While net income of LH and SPALI declined. As of the positive CAGR of net income, EPS has also positive growth. LH and SPALI have a negative CAGR of EPS from net income negative growth. For free cash flow of AP, it gets negative CAGR but has positive free cash flow in 2020.

Table 5.2 Growth analysis of AP, LH and SPALI

			CAG	R (2015-2	020)				
Million Baht	2015	2016	2017	2018	2019	2020	AP	LH	SPALI
Total Revenue	22,398.00	20,447.56	22,349.36	27,335.11	23,966.66	29,958.50	5.99%	1.30%	-0.52%
Total Expenses	18,555.01	17,308.13	18,813.65	23,697.64	21,082.79	26,623.58	7.49%	3.36%	-0.25%
Net Income	2,623.40	2,702.63	3,148.30	3,952.99	3,063.96	4,225.48	10.00%	-3.79%	-1.29%
EPS	0.83	0.86	1.00	1.26	0.97	1.34	10.00%	-2.18%	-3.38%
Free Cash Flow	-41.87	665.81	-32.65	-102.91	-381.03	2,169.51	-320.23%	-0.10%	39.09%

Sales growth in Q1 2020 of three companies was negative, presumably the reason for real estate to slow down since 2019. It affects the growth of the cost of good sales, revenues, expenses and net income also drop. In Q1 2021, it can be seen in Table 5.3 Growth analysis of AP, LH and SPALI 3M that AP has the highest sales growth 68.68% compared with LH at 28.62% and SPALI at -0.86%. Expense controls in Q1 showed that there was good cost control. Growth of expense lower than sales and total revenue, resulting in net income growth up to 126.8%. It is more than four times LH growth in the period.

Table 5.3 Growth analysis of AP, LH and SPALI 3M

	A	P	I	H	SPALI		
Growth Rate (%)	3M/2021	3M/2020	3M/2021	3M/2020	3M/2021	3M/2020	
Sales Growth	68.66	-29.47	28.62	-14.1	-0.86	-41.79	
COGs Growth	73.55	-32.36	22.67	-9.85	-2.91	-38.21	
Total Revenue Growth	70.47	-30.61	23.55	-12.1	-1.74	-40.28	
Total Expense Growth	61.49	-30.51	23.59	-8.78	0.69	-35.97	
Net Profit Growth	126.81	-42.64	29.79	-26.39	-1.18	-50.9	

Source: https://www.set.or.th/set/

AP operation is in the real estate activity sector. Therefore, I use table 5.4 to see the relationship between the real estate sector and Thailand's GDP.

Table 5.4 Real estate activity sector

							Billion Baht
	2015	2016	2017	2018	2019	2020	CAGR
Thailand GDP	9,521.40	9,848.50	10,259.90	10,689.80	10,932.10	10,265.30	1.52%
Real estate activity sector	332.49	354.18	377.36	400.03	417.75	426.95	5.13%
% Real estate activity sector	3.49%	3.60%	3.68%	3.74%	3.82%	4.16%	

Average 3.75%

5.2 DCF Valuation

Discounted cash flow (DCF) is a financial modeling tool used to estimate the company value based on expected free cash flows in the future and discount back to present value, known as net present value (NPV).

Pro forma statement

AP Thailand can divide revenues from sales of real estate into 2 parts; sale from low rises and sale from condominiums. The assumptions for each are listed below.

Real estate sales growth is around 6% CAGR, while low rise sales growth is 14 % CAGR and condominium sales growth is -12% CAGR (Table 5.5 Revenues forecast). As low rise growth over the past 5 years has seen high growth due to a change in strategy to target more real-demand customers, it has increased while condominium revenues have declined. Currently, low rise sales is the main driver of real estate income and the ratio between horizontal houses and condominiums is expected to remain stable or change slightly. It has not changed much in the past, so I choose to use 6% CAGR as a forecast of low rise sales in the future.

For sales from condominiums, I use the percentage of transfer information that AP has released on its website to calculate this sales.

Table 5.5 Revenues forecast

												Million Baht
Year	2015	2016	2017	2018	2019	2020	CAGR	2021F	2022F	2023F	2024F	2025F
Revenues from sales of real estate	21,638	19,653	21,124	26,200	22,679	28,949	6%	30,952	34,022	36,568	37,314	39,180
Sale from Low Rises	12,561	12,392	13,174	17,521	18,145	24,034	14%	28,841	32,302	32,948	35,254	36,506
Sale from Condominiums	9,076	7,261	7,950	8,679	4,227	4,915	-12%	2,111	1,720	3,620	2,060	2,674
Sale from Land	_	_	-	-	0	-	0%	_	_	_	_	_

Costs of sales and services directly involved in products and services, I use percentage of revenue from sales at 69% based on historical trends.

Selling and administrative expenses are operating expenses of doing a business besides costs of sales and services. In the past 5 years, selling expenses and administrative expenses are 10% and 11% of sales respectively.

Depreciation would be estimated by using the percentage of fixed assets last year due to its portion of a company's fixed asset cost that depleted during the period. It was estimated at 20% of fixed assets as the same last year.

Corporate income tax in Thailand is 20% of its annual net profit, so I applied this number to calculate tax. (Table 5.6 Pro forma statement)

Table 5.6 Pro forma statement

						N	Million Baht
Year	2019	2020	2021F	2022F	2023F	2024F	2025F
Revenues from sales of real estate	22,679	28,949	30,952	34,022	36,568	37,314	39,180
Sale from Low Rises	18,145	24,034	28,841	32,302	32,948	35,254	36,506
Sale from Condominiums	4,227	4,915	2,111	1,720	3,620	2,060	2,674
Sale from Land	0	-71	11:0		-	-	-
Other revenue	2,296	2,957	2,760	2,782	2,816	2,638	2,368
Total Revenue	24,975	31,906	33,712	36,804	39,384	39,952	41,548
Costs of sales and services	15,627	20,458	21,576	23,716	25,491	26,011	27,233
Selling expense	2,309	2,461	2,973	3,268	3,512	3,584	3,763
Administrative expenses	3,134	3,699	3,514	3,863	4,152	4,237	4,448
Other expense	13	6	29	32	35	36	37
Total Expenses	21,083	26,624	28,092	30,879	33,190	33,867	35,482
EBITDA	3,984	5,513	5,852	6,190	6,492	6,413	6,422
Depreciation	(92)	(231)	(232)	(264)	(297)	(328)	(356)
EBIT	3,892	5,283	5,620	5,925	6,195	6,086	6,066
Financial Cost	(247)	(367)	(274)	(208)	(199)	(167)	(128)
Tax	(581)	(690)	(1,069)	(1,143)	(1,199)	(1,184)	(1,188)
Net Profit	3,064	4,225	4,276	4,574	4,797	4,735	4,751
EPS	0.97	1.34	1.36	1.45	1.52	1.51	1.51

The forecast period from 2021 to 2025, revenues from sales begin at 30,952 million baht in this year (2021) and steadily increase to 39180 million baht in 2025 with 6.07% CARG. While the total revenues increase from 33,712 million baht to 41,548 million baht. Total expenses rise from 28,092 million baht to 35,482 million baht, which is 6.01% CAGR. This is the reason why net profit grow up from 4,225 million baht to 4,751 million baht with 2.67% CAGR. Even though it slightly drop to 4,735 million baht in 2024. Earnings per share growth also increase with the same CAGR, from 1.36 baht per share in 2021 to 1.51 baht per share in 2025.

Discounted Cash Flow (DCF)

Discounted cash flow is the method that I use to determine enterprise value and the weighted average cost of capital (WACC) as the discount rate to get present value.

I calculate the cost of equity (R_e) by using the Capital Asset Pricing Model (CAPM). Risk free rate from 10-year government bond yield is 1.445% on 14 July 2021 (Source : Worldgovernmentbond).

Thailand received a Baa1 rating from Moody's. Professor Aswath Damodaran's market risk premium was 6.27%, the last update on January 8, 2021, which does not reflect the present. The last update we got from Thomson Reuters was at 6.87%, so I use this number instead.

For Beta, I use 1.463 from Thomson Reuters, monthly for 5 years using a least squares linear regression line to reflect a company's common stock price volatility relative to market price volatility. Therefore, cost of equity (R_e) is 11.50%.

Cost of debt (R_d) is 2.79%, the costs of bank debt and debentures from 2.79% and 2.78% in the first quarter and the second quarter in 2021, which AP announced. The numbers are almost the same, I use larger numbers to be conservative. deduct tax rate 20%, resulting in After-tax cost of debt is 2.23%.

Weight of debt (W_d) and weight of equity (W_e) are calculated from net debt compared with the equity in forecast year 2021, which is 31.92% and 68.08% respectively.

Totally, the weighted average cost of capital (WACC) is 8.54%, the calculation is in Table 5.7 WACC Calculation.

Table 5.7 WACC Calculation

1.463
1.45%
6.87%
11.50%
68.08%
2.79%
20.00%
2.23%
31.92%
8.54%

$$WACC = \frac{E}{E+D} * R_E + \frac{D}{E+D} * R_D * (1-T)$$

Where:

E is the market value of Equity

D is the market value of Debt

RE is the required rate of return on equity

R_D is the cost of debt, or the yield to maturity on existing debt

T is the corporate tax rate.

$$R_E = R_f + \beta * (R_m - R_f)$$

Where:

R_E is the required rate of return on equity

R_f is the risk free rate (10-year government bond yield)

Beta is a measure of a stock's volatility

R_m-R_f is market risk premium or MRP

Reference: https://magnimetrics.com/understanding-the-weighted-average-cost-of-capital-wacc/

Earnings after tax is 4,550 million baht in 2021 and 4,879 million baht, which is 1.76% CAGR. Working capital change compared with the previous year negative 4,937 in 2021 after that becomes a positive in 2022 to 2025. For capital expenditure, I use the largest percentage of sales in the past 5 years to estimate. Most of the spending is used for low rise projects that drive future growth. It increases from 390 million baht to 494 million baht, which is 6.07% CAGR in the next 5 years.

Terminal value is 25,551 million baht that calculated from terminal growth rate is 1.374% based on average inflation rate in 2021-2025. Since the cost of building real estate consists of raw materials, labor, etc., which all increase year by year with inflation rate causing the selling price increase accordingly. Therefore, I use inflation rate that the company expected to grow perpetually. Present of firm value 41,660 million baht. After deducting the net debt, the equity value amounts to 25,564 million baht, equivalent to 9.40 baht per share. See in Table 5.8 Discounted cash flow.

Table 5.8 Discounted cash flow

						Million Baht
Period	0	1	2	3	4	Terminal Value
Year	2021F	2022F	2023F	2024F	2025F	
EBIT	5,620	5,925	6,195	6,086	6,066	
Tax	(1,069)	(1,143)	(1,199)	(1,184)	(1,188)	
EBIT after tax	4,550	4,782	4,995	4,902	4,879	
Depreciation	232	264	297	328	356	
Working Capital change	(4,937)	3,913	3,246	951	2,235	
CAPEX	(390)	(429)	(461)	(470)	(494)	
Cash flow to the firm	9,330	704	1,586	3,808	2,506	35,460
Discounted Cash Flow	9,330	649	1,346	2,978	1,806	25,551

PV of Firm value 41,660 Million Baht
Net Debt (12,096) Million Baht
Equity Value 29,564 Million Baht
Number of Stock 3,146 Million Shares
Price per share 9.40

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

Where:

CF is the cash flow for each consecutive period r is the discount rate (often use WACC)

Reference https://magnimetrics.com/discounted-cash-flow-valuation-method/

$$TV = \frac{FCF_n * (1+g)}{(r-g)}$$

Where:

FCF is the free cash flow

r is the discount rate, often WACC (weighted average cost of capital)
n is the last period in the forecast
g is the growth rate

Reference: https://magnimetrics.com/terminal-value-of-the-business/

The scale for the Rating

For deciding whether to buy, hold or sell, I use the rules in the table below to make my decision.

This rule is judged on the difference of market price and target price divided into 3 segments. If it is better than the market over 10%, recommendation should be "BUY". After comparing, if the difference between 10% upside and downside, the stock should be "HOLD". Lastly, it should be "SELL", if the target price is lower than 10%. (Table 5.9 Rating rules)

Table 5.9 Rating rules

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

The target price is 9.40 in 2021, which is higher than market current price is 8.20 as of 14 July 2021. The difference is more than 15%, so I would like to recommend, "BUY". (Table 5.10 Stock price comparing table)

Table 5.10 Stock price comparing table

Sensitivity Analysis

Discounted cash flow (DCF) valuation heavily based on key assumptions. Small changes in key variables such as terminal growth rate and the weighted average cost of capital (WACC) can produce variations in value. Sensitivity Analysis can help to understand how changes affect value in the DCF model.

The step difference between 0.5% of terminal growth rate and the weighted average cost of capital (WACC), therefore in table 5.11 Sensitivity analysis shows WACC between 7.54% and 9.54% and terminal growth rate between 0.37% and 2.37%. The highest price is 13.14 baht at terminal growth 2.37% and WACC 7.54% and the lowest is 7.28 baht at terminal growth 0.37% and WACC 9.54%.

Small change of 1% at WACC with the same terminal can push the price up to 11.13 baht and drop down to 8.09 baht. The same as the 1% change of terminal growth rate with the same WACC, the highest one is 10.81 baht and lowest is 8.33.

Table 5.11 Sensitivity analysis

	Terminal Growth									
		0.37%	0.87%	1.37%	1.87%	2.37%				
	7.54%	9.68	10.35	11.13	12.05	13.14				
\mathcal{C}	8.04%	8.96	9.54	10.20	10.97	11.87				
WACC	8.54%	8.33	8.83	9.40	10.05	10.81				
	9.04%	7.78	8.21	8.70	9.26	9.90				
	9.54%	7.28	7.66	8.09	8.57	9.13				



CHARTER VI CONCLUSION

AP (Thailand) Public Company Limited (AP) was established by Mr. Anupong Asavapokin and Mr. Phichet Wiphavasupakorn in 1991. Its core business is developing and selling real estate. The company attaches great importance to the customer needs, as it has a wide product and develops its operation seriously. This is the key to the company's sustainable growth. In addition to the responsibility to its customers, the social responsibility is evident from getting the highest CG score.

Macroeconomic factors that relate to this sector are GDP, unemployment rate and Household debt. GDP in Thailand contracted at 6.4 percent in 2020, projected to grow at 2.2 and 5.1 percent annually in 2021 and 2022. Negative factors are caused by the new wave impact of the COVID-19, but there are still positive factors from expanding exports and economic stimulus measures. Meanwhile, the unemployment rate of Thai people increased by 1.96 percent compared to the previous quarter and salaries, bonuses and OT wages declined, affecting income and household confidence. Household debt continues to grow due to deteriorating economic conditions.

There are the reasons why domestic purchasing power in the real estate market slowed down and the residence market continued to contract sharply. The developers change plans to focus on low-rise houses, which is the real demand for housing. The expansion of public transport such as BTS gives developers more opportunities. They are looking for a new location in the suburbs to gain more profit as the price in Bangkok rises. Major developers' revenues continue to grow.

Sansiri, Quality Houses, LH, LPN, Pruksa, Supalai, 8990 Holdings from Philippines and UOA Development from Malaysia are considered competitors for AP in the same industry and similar core businesses. Comparing the growth of revenue and net income in the past 5 year with LH and SPALI, AP has better performance than the other does. Besides AP can get net income growth up to 126.8% in Q1 compared with the same period last year. It emphasizes strong growth.

I use discounted cash flow to estimate enterprise value and the weighted average cost of capital (WACC) as the discount rate to get present value by using risk free rate is 1.445%, market risk premium is at 6.87%, and Beta is 1.463. Therefore, cost of equity (Re) is 11.50% and multiplied by weight of equity (We) at 68.08%. Cost of debt (Rd) is 2.79% deduct tax rate 20% can get After-tax cost of debt is 2.23%, multiplied by weight of debt (Wd) at 31.92%. Completely, the weighted average cost of capital (WACC) is 8.54%

The price from the DCF method is 9.40 baht compared, with current price 8.20 baht as of 14 July 2021, it is upside 15%. Moreover, revenue and net income is stronger than the main competitors in peer that is the reason to add stock value. I would like to recommend "BUY".



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