

**DISCOUNTED CASH FLOW VALUATION OF
TOA PAINT (THAILAND)**



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**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
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**DISCOUNTED CASH FLOW VALUATION OF TOA PAINT
(THAILAND) PUBLIC COMPANY LIMITED**

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Nichakul Sirivichayakul

DISCOUNTED CASH FLOW VALUATION OF TOA PAINT (THAILAND)

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ABSTRACT

The intention of this thematic paper is to evaluate the stock price of TOA Paint (Thailand) by applying the discounted cash flow method. The method presents the forecast of future financial statements based on TOA's financial fundamentals, expected sales growth from domestic and overseas, GDP growth, and other effects such as exchange rate risk. The target price of TOA is 38.99 Baht per share which is 25.79% upside from the price of 3 March 2023. As a result, the recommendation is to buy TOA stock. TOA is the market leader in Thailand with around 50 percent of total market share. The company is in the strong position to grow and expand after COVID-19 situation. Moreover, TOA has intention to strengthen their distribution channels both online and offline to provide "Total solution" to the customer. Nevertheless, the thematic paper provides the estimated valuation based on the limited information and several assumptions, so there might be unexpected factors affecting the valuation.

**KEY WORDS: TOA/ PAINTS AND COATINGS/ DISCOUNTED CASHFLOW/
VALUATION**

59 pages

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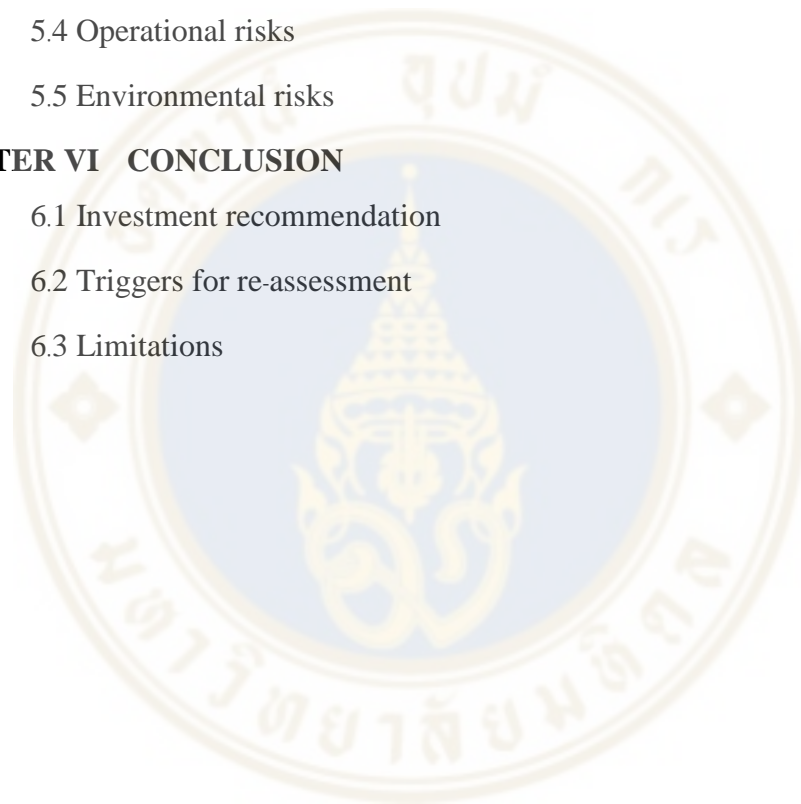
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LIST OF ABBREVIATIONS

AEC	ASEAN Economic Community
AGM	Annual General Meeting of Shareholders
AK.ZO.AS	Akzo Nobel NV
AR	Accounts Receivable
ASEAN	Association of Southeast Asian Nations
AP	Accounts Payable
BOD	Board of Director
BOT	Bank of Thailand
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CG	Corporate Governance
COGS	Cost of Goods sold
DBD	Department of Business Development
DCF	Discounted Cash Flow
D/E	Debt to Equity
Dpaint	Delta Paint Public Company limited
EBIT	Earnings before interest and Taxes
EPS	Earnings per share
FCFF	Free Cash Flow to Firm
FED	US Federal Reserve
GDP	Gross Domestic Product
IMF	International Monetary Fund
IPO	Initial Public Offering
MD&A	Management Decision and Analysis
PV	Present Value
ROE	Return on equity
R&D	Research and Development

LIST OF ABBREVIATIONS (Cont.)

SET	Stock Exchange of Thailand
SG&A	Selling general and administrative expenses
THB	Thai Baht
TOA	TOA Paint(Thailand) Public Company Limited
WACC	Weighted average cost of capital



CHAPTER I

INTRODUCTION

TOA Paint(Thailand) Public Company Limited is a company in the construction material sectors and also in the paint and coating industry. The company established in 1964 by Tangkaravakoon family and listed in the Thailand's stock exchange in 2017. The company has many subsidiaries including in Thailand and in ASEAN countries. The product of TOA categorized as decorative and non-decorative products. For the decorative products, accounted for more than 60 percent of total revenue, there are medium to economy grades and premium grade as well as the customized color. For the non-decorative ones, accounted for less than 40 percent of total revenue, there are construction chemical and heavy-duty coating product. TOA's products are distributed throughout Thailand via both offline and online channel. In addition, the products are also produced and sold in ASEAN countries, which the main market is in Vietnam. The TOA's current market share is around 50% and its competitors are mostly international companies such as Beger, Jotun, and Nippon. TOA has a strategy to maintain the no.1 in the customer's mind by differentiating their products with R&D and technology to create innovative products and service to the target segments. In addition, the company would like to expand to potential market and strengthen both direct and indirect distribution channels, together with online channel through digital platform, Whoservice.

Apart from TOA's company background, in term of financial, TOA's revenues have increased every year in the past 5 years except the year 2019 during the COVID-19 situation; while the cost of sales has also increase due to an increase in raw material price. In overall, the net profit margin has decreased over the period due to an

increase in selling and administrative expenses of hiring salesperson to expect to increase revenues.

To forecast five-year financial statement, beginning with the revenues, it is expected to grow align with the GDP of both domestic and international. The domestic sales will reach around 20,324.59million Baht in the next five years with 53.61% market shares; while the oversea sales will reach 4,493 million Baht in the next five years with 3.96% market shares. For cost of goods sold, the expectation is aligning with the sales revenue. For the selling and administrative expenses remains at the fix percentage of 12.5% and 6.5%, respectively. Finally, the net profit will be in the range of 9-11%.

In order to evaluate the valuation of TOA by using discounted cash flow method, the target price per share is 38.99 THB, which is 25% upside. The terminal growth rate is at 3.77% and the discount rate is at 6.537%. Therefore, I would recommend to “Buy” TOA stock due to strong financial figures from being a market leader in domestic and able to increase market share in oversea market. In addition, to support the recommendation, other big analyst companies including Finansia also recommend to purchase TOA stock.

CHAPTER II

BUSINESS DESCRIPTION

2.1 Business Overview

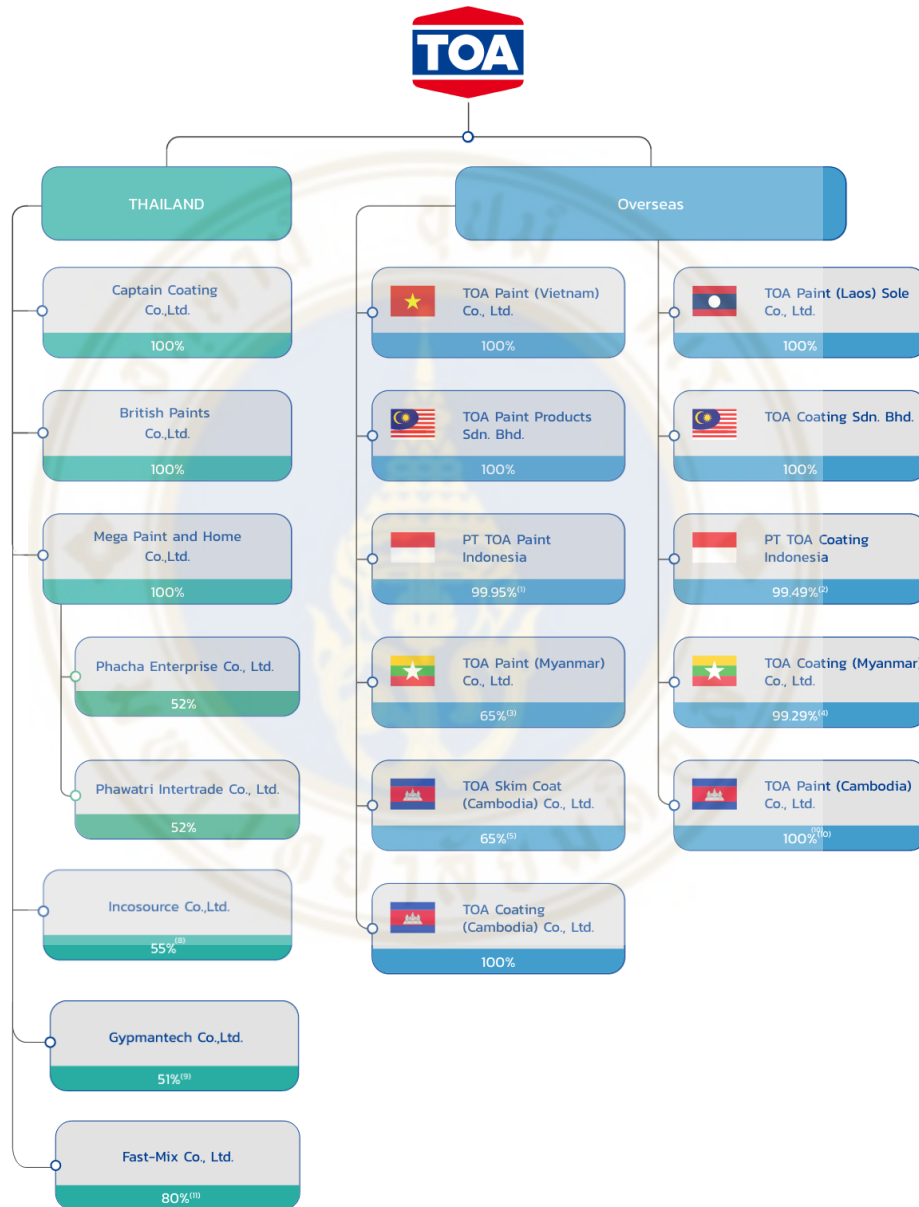
TOA Paint (Thailand) Public Company Limited is a company in the construction materials sector that produces and distributes paint and coating products in Thailand. Formerly, the business was established by the Tangkaravakoon family in 1964 as a family business which imported Japanese paint to sell in Thailand. In 1977, the company was incorporated with TOA in Thailand then tried to expand to other countries in Southeast Asia. The first foreign subsidiary was established in Vietnam in 1995. The company changed its legal status to public limited company in 2017 and registered ordinary shares for an initial public offering (IPO) of 254,000,000 shares at a par value of THB 24 per share which the company raised approximately THB 5,887.2 million which the company received to expand and develop its business, and for its working capital.

The vision of the company is “to become a leader of the end-user paint and coating industry in ASEAN Economic Community (AEC) through product differentiation and the provision of service solutions” and the company’s goal is “to be the market leader in the paint and coating industry in the AEC and successfully capitalize on the high potential growth of the region’s markets”. (TOA, 2021)

2.2 Company's Group Structure

TOA company's group structure as of July 1, 2022 is as below:

Figure 2.1: TOA's Group Structure



Sources: TOA annual report 2021

2.3 Business Lines (Products)

2.3.1 Products

The company's main products are decorative paint topcoats, sealers, and primers. Topcoats are used as the topmost coating to improve the aesthetics for either interior or exterior. In addition, sealers are used on the surface to prevent the disintegrating between substrate and topcoat, but primers will help paint adhere to the surface smoothly. Hence, it can be divided into two main categories which are decorative paint and coating products, and non-decorative paint and coating products.

2.3.1.1 Decorative Paint and Coating Products

There are three types of Decorative paint and coating products which consists of premium grade products, medium to economy grade product, and other decorative paint products as follows:

- Premium Grade Products

Premium paint and coating products provide some specific characteristics such as easy-to-use, better wash ability, enhanced surface coverage, and more durability. Technologies used for producing premium products can create value-added to satisfy customers' needs while it allows the company to charge premium prices. Moreover, this premium product was developed according to the concept of eco-friendly which it was one of the company's strategies.

- Medium to Economy Grade Products

Medium grade paints and coating products use raw materials at standard level with a different formula to produce compares to the premium product, so its price is cheaper. Additionally, the target group for medium grade paints and coatings are the first-time end users and the state sectors due to its reasonable price and its quality that was qualified as Thai Industrial Standards.

- Other Decorative Paint Products

To improve its product and service and respond to all customers' preferences, the company has launched Auto Tinting Machine to service customers which can produce various color shades within 3 minutes. Therefore, customers can customize color apart from those available colors in store or catalog.

2.3.1.2 Non-Decorative Paint and Coating Products

There are three types of non-decorative paint and coating which are construction chemicals products, heavy-duty coating products, and other non-decorative paint products. The details for each type are as follows:

- Construction Chemical Products

Construction chemical products can be used on materials or added to other materials that will be used at construction sites. There are numerous types of construction chemicals such as tile adhesive mortar, filler and sealant, wall rendering, concrete bonding and repairing, and wall rendering that are usually used together with construction materials which provides specific features such as increasing functionality and improving the capacity that can help to increase workability in constructing.

- Heavy-Duty Coating Products

This type of product is the topcoats under the "HeavyGuard" brand. It is often used on surfaces that must withstand intense conditions such as corrosion and heavy weights. Furthermore, it can be applied with several surfaces such as pipes, concrete walls, and steel structure and it will help to prevent cracks on surfaces.

- Other Non-Decorative Paint Products

Other Non-Decorative Paint Products are paint and coating products for wood, hardware, products under Shell brand and Chiandrite brand, particular paints, auto tinting machines, gypsum boards, and tiles.

2.3.2 Revenue Structure

According to the table, it illustrates the company's sales breakdown from 2019 to 2021 which can be obviously seen that the highest proportion of sales was decorative paint and coating products.

Table 2.1: TOA's Revenue Structure

	Year ended December 31					
	2019		2020		2021	
	THB million	%	THB million	%	THB million	%
Decorative Paint and Coating Products	11,635.0	68.5	10,774.3	66.1	11,078.0	63.0
Non-Decorative Paint and Coating Products	4,866.1	28.7	5,185.2	31.8	5,938.3	33.8
Other Products ⁽¹⁾	477.2	2.8	336.5	2.1	554.2	3.2
Total	16,978.3	100.0	16,296.0	100.0	17,570.5	100.0

Sources: TOA annual report 2021

2.4 Strategies

2.4.1 Enhance brand engagement to be No.1 in the customer's mind

To maintain leadership as a top-of-mind brand, the company utilized cutting-edge technology to manufacture high-quality products and try to satisfy all customers with a comprehensive selection through differentiated products based on either pricing or functionality. Due to the company's strong research and development capabilities, it is devoted to sophisticated technology such as the auto tinting machines that can respond to an upcoming trend and customer's demand quickly which enable the company to capture at competitive prices through these better functionalities and greater value propositions. In addition, the company will benefit from this competitiveness and economies of scale which creates a greater opportunity for the company to grow further and earn more profit.

2.4.2 Expand into New Potential Markets

Expanding into a new potential market will provide the company with more availability in reaching distribution networks. Additionally, the company has expertise in the expansion into AEC markets where the company has already operated in Vietnam, Indonesia, Myanmar, Cambodia, Laos, and Malaysia. Hence, enhancing the company's presence in the AEC can stimulate the demand for products. Apart from that, more product segments will also help the company to stably increase sales growth and can take advantage of the market that has high growth potential. The company expanded its product segment by providing construction materials that cover entire processes since the beginning of the construction until painting and renovate. Therefore, a wider range of product lines will let end users have more choices to consider and can respond to their wants and needs so these will help to stimulate the company's total sales.

2.4.3 Develop innovative products and services for target segments

The company has a strong emphasis on research and development which has already successfully responded to changes in climate conditions, technology improvements, and consumer demands by efficiently using existing products technical. Furthermore, the company has made a commitment to develop eco-friendly products to satisfy customers who aware about environmental issues which the company already succeeded in developing with recyclable raw materials while its production and technologies are environmentally friendly, as well.

2.4.4 Strengthen distribution channels

The company would like to reach every customer's segment as much as possible. The company has an intention to expand their distribution channels by applying the strategy of both direct and indirect sales. First, the company has chosen the retail distributors to directly introduce and promote products to the retail shop's owners/customers. Secondly, the company ensures that the product consultants will provide in-depth information and recommendations to the end-users in order to let them

get the suitable product through modern trade distribution channels. Lastly, the company sells the products through the project sales teams which sell directly to the project owners and customers for the project-based work. In addition, the project sales teams and sales spec teams will design the logistic system together with the project owners and customers. Apart from the existing products, the company would bring out the synergy from the expanding distribution channels by distributing the new product to the markets including construction chemicals, which would support the company's growth.

2.4.5 Embrace digital platform

Due to the era of digital transformation together with the price competitive, the company introduced the digital platform to support the changes. Customers' behavior has been changed over the period and technology is the key to influence the customers' decision, economic and social.

The company built "www.whoservice.com" to match the demand of the house's owner who would like to fix, renovate, or build a new home with the professional subcontractors who passed the TOA standard and provide the total solution to the customers as one-stop service

Apart from the platform, the company has an online distribution channel, which not only provides e-commerce, but also the design service that customers can select the color shade and other TOA products. In addition, customers can search the store location through the www.toasamart.com

Moreover, in the digital era, the company also uses PR channels through social media such as Facebook and Youtube in order to create brand image for TOA products.

2.5 Management and governance

2.5.1 Management

The table below shows TOA's management team as at March 1, 2022 which comprised of 6 members as follows:

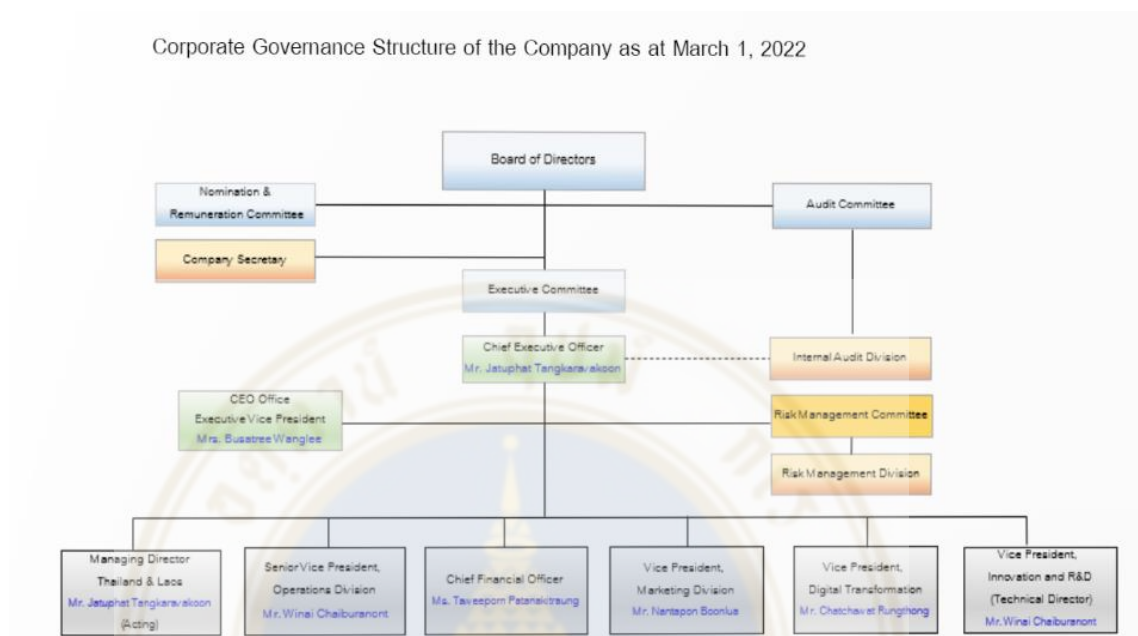
Table 2.2: TOA's Management Team

Name	Position (as at March 1, 2022)
1. Mr. Jatuphat Tangkaravakoon	Chief Executive Officer, and Acting Managing Director, Sales Division-Thailand & Laos
2. Mrs. Busatree Wanglee	Executive Vice President, Office of Chief Executive Officer
3. Miss Taweeporn Patanakitraung	Chief Financial Officer, and the person supervising accounting
4. Mr. Winai Chaiburanont	Senior Vice President, Operation Division, and Vice President, Innovation and R&D (technical Director)
5. Mr. Nantapon Boonlua	Vice President, Marketing Division
6. Mr. Chatchawat Rungthong	Vice President, Digital Transformation

Sources: TOA annual report 2021

2.5.2 Corporate governance (CG)

Figure 2.2: TOA's Corporate Governance Structure



Sources: TOA annual report 2021

According to the annual report in section 7, Corporate Governance Report, the company complied with the CG code, which is the SET's principles of good Corporate Governance for Listed companies. Apart from CG code, the company also complies with Corporate Governance Report (CGR), ASEAN CG Scorecard, and AGM checklist as well as the ESG reporting enhancement.

For the company performance regarding the CG, the company gets a full score of 100% AGM quality by Thai Investors Association (TIA), and 5-star - excellent level for CGR assessment result under the CGR of Thai Listed companies 2021.

“Principle 1: Establish a clear leadership role and responsibility of the Board in order to protect the shareholders and stakeholders to benefit the most. The Principle 1 can be break down as below:

Principle 1.1: The BOD defines the company's vision, mission and guidelines for the whole organization to follow including the directors, management teams and employees in order to acknowledge the same goals which will be annually reviewed

Principle 1.2: The BOD is the leader to lead the company to create sustainable value and achieve governance outcomes including long-term oriented competitive advantages and performance, ethical business for shareholders and stakeholders and fairness to customers, social and environment responsibility and resilience in any situation.

Principle 1.3: The BOD has the duty to monitor that all directors and managements have the responsibility, duty of care, duty of loyalty and operate the business following the law and regulation as well as the agreement of the shareholders' meeting.

Principle 1.4: The BOD thoroughly understands the roles and responsibilities of all functions, and also identifies clear roles and responsibilities of the Chief Executive Officer (CEO) and the management including ensuring those CEO and management properly perform their roles.

Principle 2: Define Objectives to create the sustainable value

Principle 2.1: The BOD determines and overlooks the objectives of sustainable value creation and ensures that all objectives are aligned and create the value for the whole organization, customers, stakeholders and society.

Principle 2.2: The BOD ensures that the company's objectives and medium-term or annual strategies and plan are aligned, and also safely and properly applied the innovation and technology to enhance the competitive advantages.

For this principle, the company consistently creates new products which are high-quality and eco-friendly by applying the technology. The BOD always gives the

helpful opinion to the management team to make sure that the financial goals are in line with the defined objectives.

Principle 3: Strengthen Effective Board of Directors

Principle 3.1: the BOD's responsibility is to determine and review the board structure including the size, composition and the proportion of the independent directors in order to achieve the specified objective. The BOD has to ensure the qualification of the board member including the skills, experiences, competencies and other characteristics such as sex and age. There should be at least 5 board members, but no more than 12 persons. In addition, the policy has to be published on the website and annual report.

Principle 3.2: The BOD should appoint the suitable person to be a Chairman and ensure the composition and operation of the boards are independent.

Principle 3.3: The BOD monitors that directors appointment process are transparent and clear in order to set up the boards following the defined policies. The process includes appointment of independent directors, nomination and termination of the existing directors.

Principle 3.4: The BOD proposes directors' remuneration to the shareholders meeting for approval. The BOD should consider to set the suitable structure and remuneration rate following the responsibility and incentive to motivate the directors to lead the company following the short-term and long-term plan and objectives.

Principle 3.5: The BOD ensures all directors have their duties, responsibilities, and properly allocate their time to work on their duties and responsibilities. The BOD has to prevent the directors from conflicts of interest. The directors have to participate at least 75% of the total arranged meeting.

Principle 3.6: The BOD should ensure the framework and policies are applied to all subsidiaries and other related companies with significant interest, and those significant interests comply with such framework and policies.

Principle 3.7: The BOD should execute the annual performance assessment for the company's BOD, sub-committee and individual directors, and the result of assessment will be used in the performance development.

Principle 3.8: The BOD should ensure that BOD and individual directors have an understanding of their duties, nature of business and law and regulation for business. In addition, the directors will always be encouraged to develop themselves and knowledge for their duties and responsibilities.

Principle 3.9: The BOD ensures that all BOD's performance is good and able to access the necessary information. In addition, the company has company secretary who has sufficient knowledge and experiences which is suitable for BOD performance support.

Principle 4: Recruit and develop the top management and human resource management

Principle 4.1: The BOD ensures that there is recruitment and development for the top management to gain knowledge, skills, experiences and qualification which are required to drive the organization to reach the objectives.

Principle 4.2: The BOD ensures that there is proper compensation structure and performance assessment.

Principle 4.3: The BOD understands the shareholders' structure and the relationship, which might have a conflict of interest on the company's operation.

Principle 4.4: The BOD follows up the human resource management and development to ensure that there are sufficient numbers of employees, skills, experiences and motivation.

Principle 5: Innovation enhancement and accountability on the business operation

Principle 5.1: The BOD encourages innovation which create value to the business together with the value creation for customers, stakeholders, society and environment.

Principle 5.2: The BOD ensures that all departments operate in alignment with the company's objectives, goals and strategies. The management runs the business with responsibility to every stakeholder, social and environment including fairness to labor, responsibility for shareholders, customers and consumers, partners and creditors, policy and practice for competitors, society and social development, environment, human right, and intellectual property law.

Principle 5.3: The BOD ensures that the management effectively and efficiently allocates the resources with the consideration of the impact and resource development for the whole value chain in order to sustainably achieve the objectives and goals.

Principle 5.4: The BOD ensures that there is management on Information Technology at the organizational level, which is aligned with the organization's requirement. In addition, the BOD ensures that the company brings the technology to increase the business opportunity and develop operation, risk management in order to achieve the company's objectives and goals.

Principle 6: Risk management and internal control

Principle 6.1: The BOD ensures that the company has risk management and internal control to effectively achieve the company's objectives and comply with law and regulations

Principle 6.2: The BOD appoints the audit committee who independently and effectively work in the organization.

Principle 6.3: The BOD follows up and manages the conflict of interest which might happen between company, management, shareholders, and

prevents inappropriate use of the company's assets, information, and opportunities and related party transactions.

Principle 6.4: The BOD manages to have anti-corruption policy and practices and communicate to every level of the organization and to external party

Principle 6.5: The BOD manages to have a mechanism to receive the complaints and whistleblowing.

Principle 7: Ensure the financial credibility and disclosure

Principle 7.1: The BOD is responsible for the financial statement preparation and discloses any important information correctly, sufficiently and timely. In addition, the financial statements should comply with the rule, regulation, standards and related practices.

Principle 7.2: The BOD should ensure the company's liquidity and debt solvency.

Principle 7.3: The BOD monitors the company to have plans or mechanisms to solve the problems under the financial crisis or potential financial problem under the consideration of the rights of the stakeholders.

Principle 7.4: The BOD considers to appropriately conduct the sustainability report.

Principle 7.5: The BOD manages to have the investor relation to communicate with the shareholders and other stakeholders appropriately, fairly and timely.

Principle 7.6: The BOD encourages the use of IT for the information distribution.

Principle 8: Encourage to engage and communicate with the shareholders

Principle 8.1: The BOD ensures that the shareholders engage in the important decision making of the company.

Principle 8.2: The BOD ensures that the shareholders' meeting smoothly runs with transparency, effectiveness and right exercise.

Principle 8.3: The BOD discloses the shareholders' meeting and conducts minutes of shareholders' meeting with correctness and completeness." (Annual Report, 2021, p.162-p.215)

2.5.3 Major Shareholders

The major shareholders of TOA are Tangkaravakoon family, which ranks 9th of Thailand's 50 Richest in 2022 with net worth of \$2.8 billion. The family started from the hardware business and expanded to paint supplies by importing paint from Japan. As this is the family business, Mr.Prachak has 4 children and equally gave the shares to them as below list shows. The family holds 75% of the total number of shares, which means that there are only 25% of minor shareholders or 25% of free float, which is considered as low free float.

Table 2.3: Top 10 major shareholders of TOA

(A) Top 10 major shareholders as at March 14, 2022.

Shareholders	No. of Shares	% Shareholding
1. TOA Group Holding Co., Ltd.	608,400,000	30.0
2. Mr. Vonnarat Tangkaravakoon	182,600,000	9.0
3. Mr. Jatuphat Tangkaravakoon	182,600,000	9.0
4. Mr. Nattavuth Tangkaravakoon	182,600,000	9.0
5. Mrs. Busatree Wanglee	182,600,000	9.0
6. Mr. Prachak Tangkaravakoon	91,300,000	4.5
7. Mrs. Laor Tangkaravakoon	91,300,000	4.5
8. MORGAN STANLEY & CO. INTERNATIONAL PLC	75,300,000	3.7
9. Bualuang Long Term Equity Fund	53,115,500	2.6
10. Bualuang Top Ten Fund	32,865,500	1.6

Sources: TOA annual report 2021

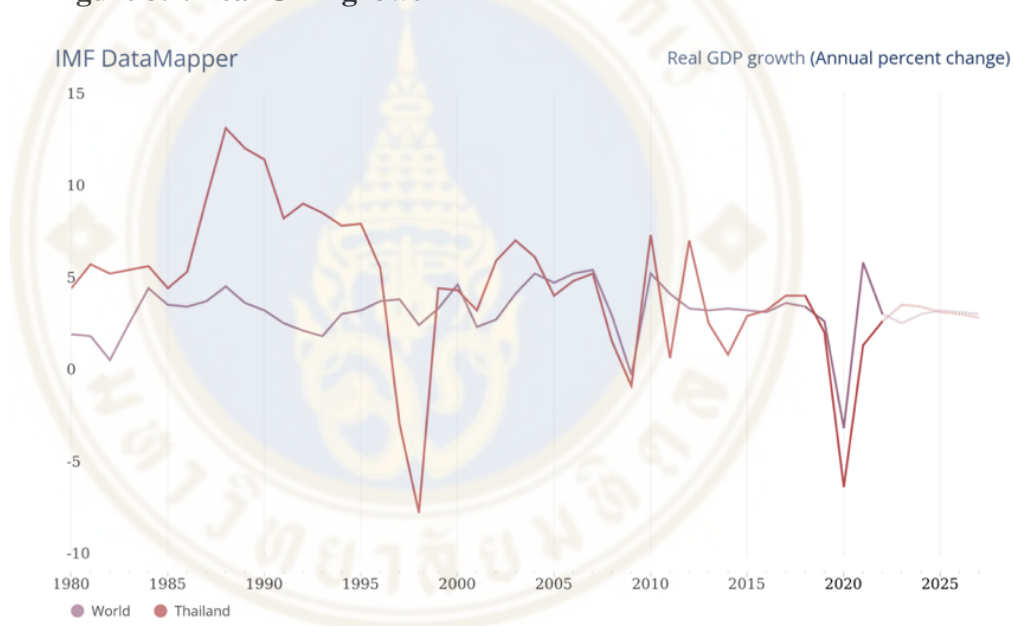
CHAPTER III

MACRO-ECONOMIC, INDUSTRY AND COMPETITION ANALYSIS

3.1 Macro-Economic Analysis

3.1.1 Global and Thai GDP

Figure 3.1: Real GDP growth

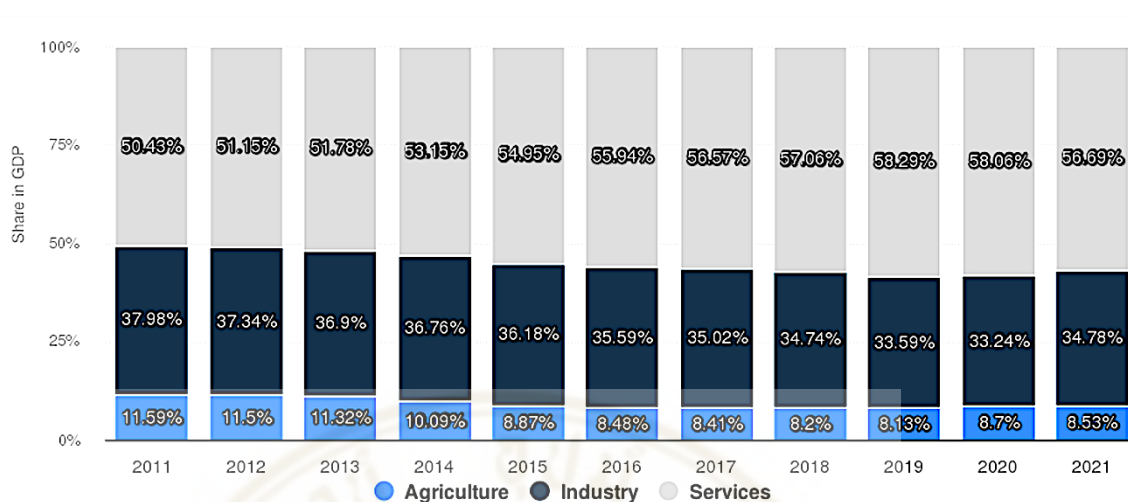


	2019	2020	2021	2022	2023F	2024F	2025F
Global	2.8%	-3.0%	6.0%	3.2%	2.7%	3.2%	3.4%
Thailand	2.2%	-6.2%	1.5%	2.8%	3.7%	3.6%	3.3%

Sources: IMF data mapper

According to the Figure 3.1 from the International Monetary Fund (IMF), it illustrates real GDP growth between Thailand (red line) and the global (purple line). Real GDP growth of both global and Thailand decreased significantly in 2020 due to COVID-19 outbreak that affect the whole economy. The global GDP growth reduced from 2.8% in 2019 to -3% in 2020 then rose to 6% in 2021 but growth will decelerate which will remain approximately at 3% for the following year. For Thailand, GDP growth also decreased from 2.2% in 2019 to -6.2% in 2020 then gradually increased to 1.5% and 2.8% in 2021 and 2022, respectively. IMF expected that Thai GDP will remain around 3% to 4%.

In 2019, COVID-19 pandemic began in Wuhan, China that quickly and widely spread leads the global economy in 2020 experienced a severe recession along with the lockdown policy that was used to mitigate and control the outbreak. The global economy was in a downturn aligned with the decline in global demand which related to several parts including private consumption, investment, manufacturing production, international trade, and tourism. For Thailand, according to the figure below, it represents that the main component of Thai GDP is the services sector followed by industry and agriculture, respectively. Since the government announced the lockdown policy and other restrictions, it also impacted service sectors such as entertainment, sports venues, hotel, and restaurant. People avoided going and eating outside while they were more careful about spending. There was a decline in the numbers of foreign tourists and Thai people did not travel to other provinces which may cause local businesses to shut down permanently. However, GDP growth in the future is expected to be higher when there is a relaxation of restrictions. For example, China announced the lessening of international travel restrictions in 2023 which will benefit the tourism sector in Thailand that also drives Thai GDP.

Figure 3.2: Share of economic sectors in Thai GDP

Sources: Statista 2023

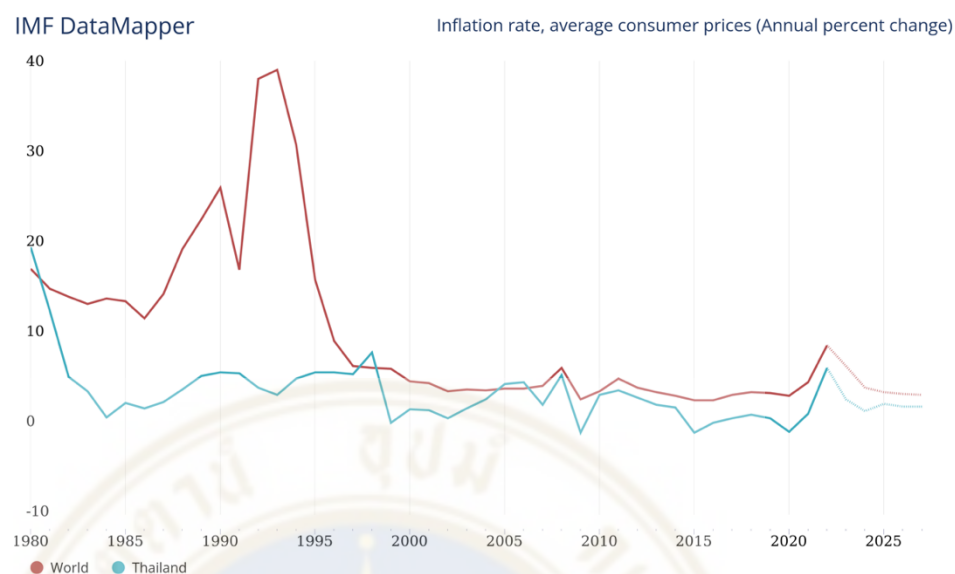
Moreover, TOA is a company in the construction material sector in the property and construction industry so the impact on the company was aligned with the contraction of the property market and TOA faced late payment from some customers that might result in the company's bad debt. Several companies decelerated their investment while ongoing construction has been ceased due to worker movement prohibition. From the customer's side, they were more cautious when the economic slowdown that impacted customer's ability to pay so they delayed their purchasing decision. In addition, COVID-19 affected the production of TOA because it imported raw materials from overseas, so its raw materials price relates to petrochemical prices and foreign exchange rates. "TOA's cost of sales was attributable to the average cost per unit of main raw material increased (TOA MD&A, 3/2022)". However, when people get vaccinated, and it has a decline in number of infection cases, every country started to alleviate the restrictions then economy recover considerably in 2021 but growth will slow down in the following year because it already experienced high growth with the max capability of recovery. But Thai GDP growth also increased from 2021 to 2022 that might be because Thai government relief measures are quite delayed. After easing restrictions, it will stimulate the economy and boost the demand for construction

materials, as well. Hence, TOA will have positive effects on its future cash flow and performance from the country's economic recovery after Covid-19.

3.1.2 Inflation rate, Interest rate, and Exchange rate

- **Inflation rate**

According to the Figure 3.3, global inflation rate in the past few years was approximately 3% while Thailand has inflation around 1%. In 2020, global inflation rate was 3.2% while Thailand inflation dropped to -0.8%. Then, inflation rate gradually increased until 2022 when global inflation rate was 8.8% and Thailand inflation rate was at 6.3%. A rising in global inflation was because of an imbalance between supply and demand, as well as the effect of the war in Ukraine of energy prices. From the demand-side factor, there is an increasing trend in line with the global economic recovery because many countries have focused on distributing vaccines instead of implementing strict control of an outbreak as well as there was financial relief from the government to households that also help to boost people's purchasing power and demand was rapidly return. At the same time, the manufacturing sector that had been disrupted at the beginning of the outbreak has gradually returned but it is still not enough to meet demand. As a result, overall product prices have increased considerably such as semiconductor products and commodities. Moreover, Thailand's inflationary pressure from both the demand-side and the supply-side factors is lower than many countries partly because Thai economy is still in a recovery phase and it is expected to return to pre COVID-19 levels in early 2023, as the Thai economy is highly dependent on the recovery of the tourism sector and labor income remains fragile.

Figure 3.3: Inflation rate

Sources: IMF data mapper

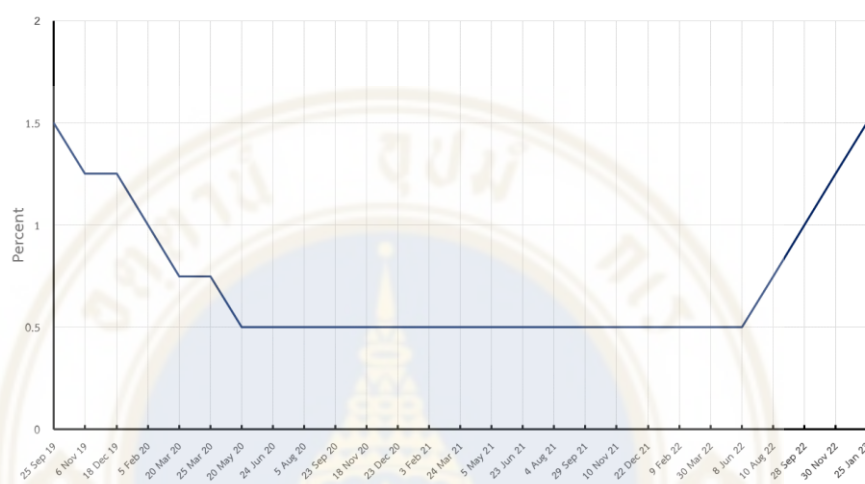
In 2022, several central banks contracted their monetary policy in order to maintain inflation rate within the target range and IMF expected that it will decrease in 2023 and slightly drop toward the target inflation rate. Additionally, as stated in the monetary policy report from the bank of Thailand (BOT), “inflation rate increased as energy price and electricity cost increased which are the supply-side factor”. TOA imports raw materials from overseas, so the price of raw materials generally fluctuates with the energy price which leads TOA to have a higher total expense.

- **Interest rate**

The policy interest rate is the rate that the central bank pays to commercial banks who deposit money or the rate that the central bank charges from commercial banks when borrowing money. Also, policy rate is one of the central bank's instruments to control inflation and influence the economy. For Thailand, the policy rate is a 1-day bilateral repurchase rate which influences other types of interest rates in the economy. Generally, there is a positive relationship between policy interest rate and the deposit and loan interest rate of commercial banks. When the policy rate increases,

commercial banks will increase their deposit and loan interest rate, but it will not increase in the same proportion as policy rate because commercial banks need to consider several factors such as inflation, demand for loan, quantities of deposit, and other costs.

Figure 3.4: Policy interest rate in Thailand



Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
0.50%	0.75%	1.00%	1.00%	1.25%	1.25%	1.50%

Sources: Bank of Thailand (BOT)

According to the figure from BOT, Thailand's policy rate declined to 0.5% in May 2020 and remained at this rate until June 2022. To alleviate impacts of COVID-19, BOT uses an expansionary monetary policy which is reducing policy rate in order to increase money supply. Additionally, BOT implemented several policies for both businesses and retail borrowers such as debt-restructuring, debt reduction, debt holidays, loan supporting for SMEs, lowering services fees and interest rate ceiling, and minimizing repayment rate for a credit card. Although a declining policy rate can stimulate economic growth but if people overspend, it will increase the price of goods and services which might lead to hyperinflation. In the third and fourth quarter of 2022, BOT responded to Thai economic recovery and prevent inflation risk due to its previous

accommodative monetary policy, so they decided to increase the policy rate by 0.25 basis points in August, September, and November, consecutively. In January 2023, the policy rate was at 1.5% which BOT tries to normalize the growth and inflation outlook.

Changing interest rate can influence consumer behaviors in several ways because a lower policy rate means that borrowing cost is lower so the customers may be more willing to spend. In contrast, depositors also obtain less interest rate for their deposit so they will try to invest in other assets such as stocks in order to lower their opportunity cost. However, when BOT increased interest rate in Thailand, it would cause a higher mortgage finance cost which will affect customers who are deciding to purchase properties that will impact to TOA's sales, as well.

- **Exchange rate**

Figure 3.5: Exchange rate (USD to THB)



Sources: Xe Currency Data API

According to USD to THB chart, it represents that the exchange rate is quite volatile while Thai baht appreciated against U.S. dollar throughout 2019. The exchange rate fluctuated due to the uncertainties of COVID-19 pandemic which Thai baht depreciated against U.S. dollar in the first quarter of 2020 and then appreciated in the following quarter until it began to depreciate in the second quarter of 2021 that might be because the government implemented either monetary or fiscal policy to alleviate

impacts of COVID-19. In the last quarter of 2022, Thai baht appreciated against the U.S. dollar because US Federal Reserve (FED) started to tighten its monetary policy. Recently, FED is more aggressively tightened its monetary policy by increasing policy interest rate in order to prevent higher inflation which attracted investment flow into US leads U.S. dollar to strengthen meaning that Thai baht will depreciate against U.S. dollar.

A fluctuation in exchange rate due to COVID-19 affects TOA because the company has foreign plants and operates internationally. TOA also imports raw materials from overseas so raw material prices will fluctuate according to foreign exchange rates as well as petrochemical prices. Moreover, it exports to several countries which receivable will be in foreign currency. Since TOA is both importer and exporter, the company faces foreign exchange rate risk. When Thai baht appreciated against other currencies, the company will benefit from the lower cost of importing raw materials in terms of Thai baht, but it will provide negative impacts on export side as its products will become more expensive in foreign countries. Regards to TOA's MD&A, it indicates that exchange rate volatility has a greater impact on the exposure to import prices which it caused a higher raw material price leads to a higher expenses and lower net profit, consecutively. To sum up, COVID-19 has impacted global supply chain and led to economic uncertainty which affects TOA's production and performance.

3.2 Industry Analysis

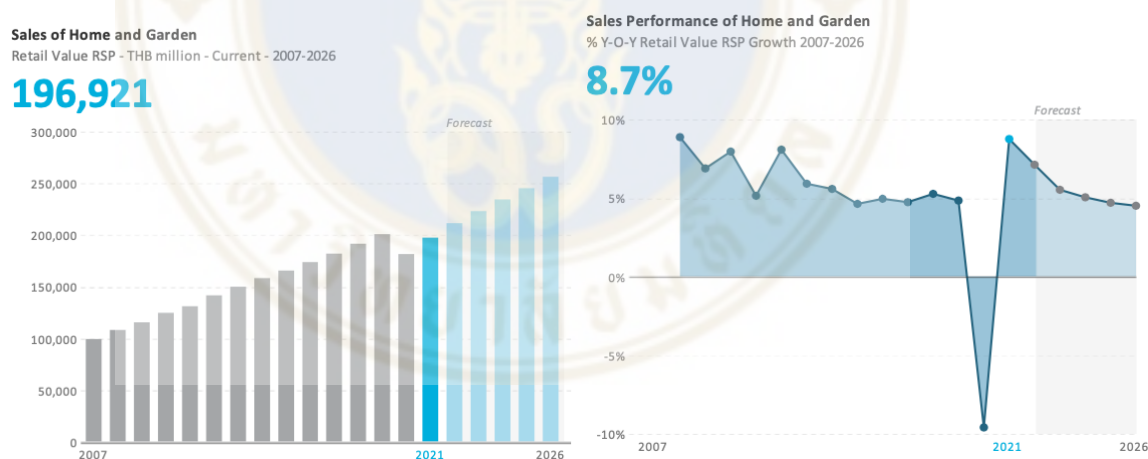
According to the industry group classification from the stock exchange of Thailand (SET), TOA operates in the property and construction industry, and is further categorized into the construction materials sector. It means that the performance of construction material companies is influenced by the property market trend.

The property and construction material industry is considered as one of the crucial industries in the economy because it has a significant role in creating jobs while the industry performance also depends on the economy. Generally, economic cycle can be divided into 4 periods which are recovery, peak, recession, and trough whereas the

property and construction material industry will obtain positive effects during recovery because the interest rate will be at a low rate meaning that lending cost is cheaper. Moreover, the stocks in this industry are considered as cyclical stocks that perform correlated with the overall economy that is influenced by business cycles.

During COVID-19, Thailand's GDP growth decreased while the inflation rate increased due to an increase in oil prices. Customer's spending is lower because they did not purchase any assets and preferred to save their money for emergencies due to a decline in purchasing power. Moreover, property developers also postponed their projects because of uncertainties about COVID-19 controlling leads to a declining in demand for construction materials. In terms of production, the pandemic caused disruption due to the lockdown restriction that decreased raw material availability while transportation was also delayed which these leads to a higher input cost.

Figure 3.6: Sales of Home and Garden in Thailand



Sources: Euromonitor

According to charts above, the industry has a strong growth in 2021 after a contraction period in 2020 but it is still not able to recover to the level in 2019. Most company implemented the work from home policy, so people's behaviors have been changed which people spent more time at home and cooked by themselves more than before. Hence, they would decorate their home to be furnished as home office and would notice some spot to repair which these will support growth in several sectors such as

home furnishing and home improvement. On the other hand, producers also lower their price to stimulate sales. For example, Index Living Mall provides a discount up to 80% and offer free of interest-free payment. In addition, several companies launched new products that is more hygienic such as Cotto that promoted touchless sanitaryware products. Also, TOA was the first developer of innovative new normal house paints in Thailand which provides new standards to protect customers from the COVID-19. Its decorative paints have a silver nano technology that provides 1+ ions, thus effectively and rapidly trapping and eliminating the corona virus, which was tested by the Faculty of Tropical Medicine, Mahidol University.

Nevertheless, government has implemented the policy to help this industry such as reducing transfer ownership fees and mortgages for properties valued under 3 million baht to 0.01% until 31 December 2022 which will attract investors and can stimulate economy. When the economy is recovering during 2022 to 2023, this industry is expected to grow as customers are more willing to invest in residential and properties and construction spending is expected to grow approximately 5%. Additionally, the public sector will spend on infrastructure megaprojects in the Eastern Economic Corridor (EEC) including developments of Map Ta Phut Port and a high-speed railway which will lead to a construction of private sector surrounding there.

Property and construction industry is expected to continue expanding according to a rebound of economy which will stimulate demand. Even e-commerce tends to grow because people are familiar with online shopping, but the nature of this industry requires customers to visit stores in order to review products before purchasing, although it is not all products that need to be tested. Additionally, the upcoming trend for this industry is smart products and sustainability. Nowadays, smart products trend becomes more popular because it is convenient and can support many functions. For example, the lighting manufacturers create smart lighting that can control by voice. Moreover, sustainability is a growing trend in the construction industry because customers are more socially conscious and environmentally responsible. The green building standards have become more common which encourage the use of eco-friendly

materials and energy-efficient designs such as energy-efficient lighting that can reduce energy consumption and carbon footprint.

To sum up, the COVID-19 pandemic impacts several parts of construction material industry such as high cost of raw materials because of inflation and a global supply chain disruption including transportation obstacles. However, the industry earnings are expected to grow during the current economic recovery period. Several analysts estimated that TOA's performance will strengthen because of the increase in price of goods and a higher demand from either domestic or foreign countries.

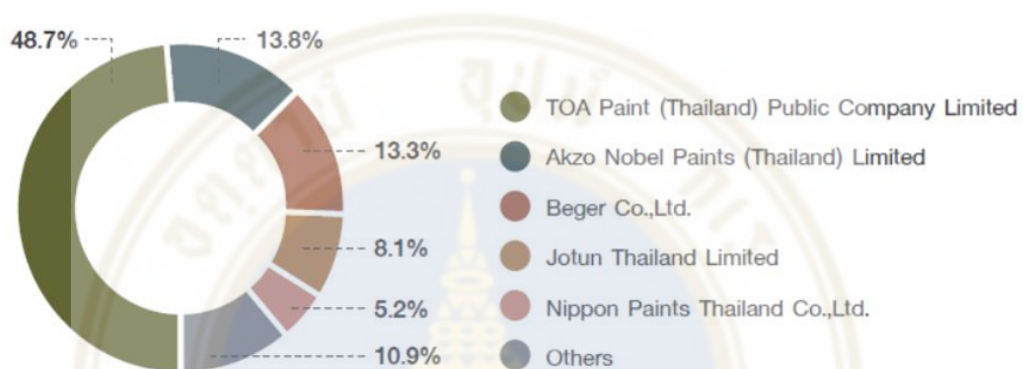
3.3 Competition Analysis

According to the annual report, it is stated that the main competitors are mostly international brands which are Akzo Nobel from Netherlands, Jotun from Norway, Nippon paint from Japan and other local paint manufactures. For the local paint manufactures, they compose of Delta Paint and Dimet Siam, which are listed in the Thailand's stock exchanges. All global brands are the direct competitors of TOA, who produce and sell the products like TOA including paints and coating. TOA gained almost 50% market share due to the competitive advantage that the company focuses on distributing their product to the end-users through the retail distribution channel. To be more comparable in Thailand market, Delta Paint and Dimet Siam will be analyzed. For Delta Paint, the company was actually established from the same family of Tangkaravakoon, who is the brother of the founder of TOA. Delta Paint or Dpaint also produces and sells paint for buildings. Their main customers are subcontractors and painters, homeowners, and project owner for private and public sectors.

Dpaint has their own research and development team to develop high quality paints such as Toptech, which reduce 75% of working time by painting only 1 time. For Dimet Siam, the company only provides the coating products, which are divided into three main groups including industrial coating for engineering use, architectural coatings for

building, home, hotel or office building and contractor service groups for both interior and exterior construction.

Figure 3.7: Market share for decorative paints and coatings in Thailand in 2016



Source: TOA annual report 2021

CHAPTER IV VALUATION

4.1 Financial Analysis

4.1.1 Growth analysis

Revenue growth

	Revenue From Operations (Million Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	16,256.83	16,978.30	16,296.00	17,570.47	4.44%	-4.02%	7.82%
Dpaint	523.44	585.75	596.16	749.46	11.90%	1.78%	25.71%

Revenue of TOA has increase from every year except the year 2020 due to COVID-19 pandemic which affected the company's performance; however, the performance has been turn around in 2021. For the Dpaint, the sector competitor, the revenue of Dpaint has increased more than TOA in term of percentage due to the fact that it launched new products between the year 2021 and 2022.

	Revenue From Operations (Million Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	12,898.81	15,204.22	17.87%
Dpaint	541.5	649.39	19.93%

In addition, for the latest period, the revenue of TOA also increased by 17.87% due to the fact that the company has increased selling price of non-decorative product and sales volume through retail and modern trade channels. For the Dpaint, the sector competitor, the revenue of Dpaint has increased more than TOA in term of percentage due to the fact that it launched new products between the year 2021 and 2022, which led a sharp revenue increase those periods, also affecting the year-on-year quarterly growth by 19.93%.

Cost growth

	Cost (Million Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	10,871.81	11,026.14	10,286.87	11,823.35	1.42%	-6.70%	14.94%
Dpaint	358.39	370.80	346.57	440.13	3.46%	-6.53%	27.00%

In the past, cost has increased and decreased aligned with the revenue growth trend until the latest year. The price of raw materials has increased a lot and affected both companies, TOA and Dpaint to show the higher increase in cost than increase in the revenue due to the higher material costs. This led to a lower profit margin for both companies.

	Cost (Million Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	8,563.57	10,783.47	25.92%
Dpaint	317.91	396.97	24.87%

For 9-month comparison, both companies' cost of sales are affected by the same reasons that the raw material prices increased.

SG&A growth

	SG&A (Million Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	3,152.81	3,361.86	3,510.06	3,515.56	6.63%	4.41%	0.16%
Dpaint	148.27	168.60	193.98	243.57	13.71%	15.05%	25.56%

SG&A growth is different between both companies. For TOA, SG&A has increased over the period until the year 2021 due to the fact that the company tried to control their selling expenses; however, it was offset by increasing administrative expenses of depreciation and amortization together with the incurred expenses of COVID-19 prevention for employees. For Dpaint, as the company is newer and just IPO in 2021, the company spend more on marketing and selling expenses since the company expand their branch and have to hire more salesperson to promote their product in the branches; however, Dpaint tried to control their administrative expenses which mainly back-office expenses.

	SG&A (Million Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	2,608.87	2,908.69	11.49%
Dpaint	170.32	205.19	20.47%

For 9-month comparison, both companies' SG&A are in the same trend of an increase in SG&A expenses due to the same reason as above.

Net Profit growth

	Net Profit (Million Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	1,824.88	2,162.48	2,031.16	1,955.05	18.50%	-6.07%	-3.75%
Dpaint	12.08	36.20	42.90	52.59	199.67%	18.51%	22.59%
	EPS (Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	0.90	1.07	1.00	0.96	18.89%	-6.54%	-4.00%
Dpaint	0.05	0.16	0.19	0.28	220.00%	18.75%	47.37%

The growth trend of net profit has decreased for TOA due to lower gross profit and increase SG&A expenses over the period. For Dpaint, the net profit has increased overtime since 31 Dec 2018 to 31 Dec 2021.

	Net Profit (Million Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	1,482.54	1,131.69	-23.67%
Dpaint	42.71	38.71	-9.37%
	EPS (Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	0.73	0.55	-24.66%
Dpaint	0.18	0.18	0.00%

For 9-month period comparison from the year 2021 and 2022. TOA has performed worse as the net profit margin has dropped by 24% due to the lower gross profit, which is mainly from higher in raw material cost. For Dpaint, the net profit just dropped in the last quarter comparing to the same quarter in prior year due to the increase in raw material price and the increase in selling expenses of promoting the new product.

Free Cash flow growth

	Free Cash Flow (Baht)				Growth (%YoY)		
	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 19	31 Dec 20	31 Dec 21
TOA	1,168.56	1,680.33	1,520.08	2,175.06	43.79%	-9.54%	43.09%
Dpaint	8.38	15.79	62.84	- 8.69	88.42%	297.97%	-113.83%

Free cash flow of TOA has decreased between the year 2019 and 2020 due to the fact that the company repaid their debt and purchased investment during that period. For Dpaint, free cash flow has sharply decreased over the 5-year period and became negative in the year 2021 due to repaying of debt, and large purchases of property plant and equipment including machines to expand capacity.

	Free Cash Flow (Baht)		Growth (%YoY)
	30 Sep 21	30 Sep 22	30 Sep 22
TOA	1,968.43	737.25	-62.55%
Dpaint	-73.74	-113.18	53.49%

For the 9 months between 30 Sep 2021 to 30 Sep 2022, TOA's free cash flow has decreased due to new acquisitions including Gypmantech and Fast-mix. For Dpaint, it is the same effect as above that after IPO, the company repaid their debt and also purchased the machine for capacity improvement.

4.1.2 DuPont Analysis

Dupont Analysis - TOA	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	30 Sep 21	30 Sep 22
Net Profit Margin	11.23%	12.74%	12.46%	11.13%	11.49%	7.44%
Asset Turnover	1.09	1.08	0.99	0.95	0.71	0.77
Equity multiplier	1.60	1.48	1.45	1.49	1.52	1.50
ROE	19.49%	20.37%	17.81%	15.70%	12.45%	8.61%

For TOA, regarding the DuPont analysis, ROE has decreased over the 5-year period, especially in the last quarter as of 30 Sep 2022. To breakdown in the detail, the company has lower net profit margin in the last quarter, while the company used to maintain the net profit margin around 11-12%. This is due to the fact that the company has to bear the higher raw material costs, which increased more than the rate of increase in selling price. The company may seem to worsen their asset utilization; however, the company just invested in software which make the portion of asset higher.

Dupont Analysis - Dpaint	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	30 Sep 21	30 Sep 22
Net Profit Margin	2.31%	6.18%	7.20%	7.02%	7.89%	5.96%
Asset Turnover	1.12	1.13	0.89	0.76	0.71	0.65
Equity multiplier	100.86	8.01	3.26	1.66	3.51	1.56
ROE	260.34%	56.11%	20.91%	8.78%	19.66%	6.07%

For Dpaint, ROE is quite high in 2018 due to the fact that the company has high leverage that most assets are financed by debt, which is shown the very high equity multiplier. After its IPO in 2021 the ROE dropped to 8.78% since the equity multiplier decreased to 1.66 times. In addition, over the 5-year period, the company improved their profit margin. However, the asset turnover has decreased due to the fact that the company invested in facilities to improve their capacity to support the higher revenue. However, in the last quarter, their net margin dropped to 5.96% since the company spent more money on the salespersons to boost their sales which led to a decrease in ROE.

4.2 Discount Cash Flow Valuation

4.2.1 Assumption for the financial projection

4.2.1.1 Revenue/Sales forecasts

TOA's sales are divided into two categories, which are domestic and overseas. For overseas, the more than half of total overseas revenues are from Vietnam and the remaining are from other 6 countries, which are Indonesia, Malaysia, Myanmar, Laos, Cambodia and Singapore.

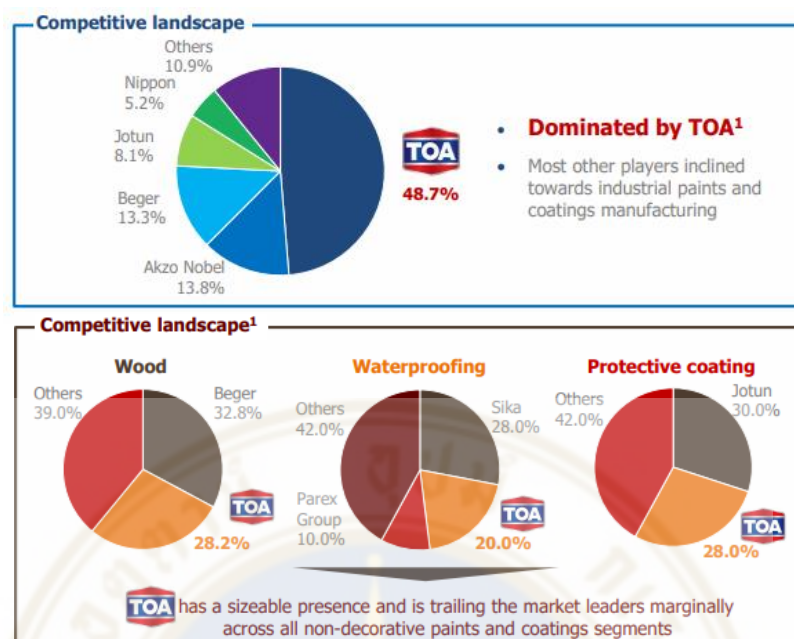
Sales portions are as below Table, where the portion of domestic and overseas of the current fiscal year are 83.40% and 16.60%, respectively. For the forecast years, the projection is from the nominal GDP and market share of the paint and coating industry.

Table 4.1: 5-year projection TOA's Domestic Sales breakdown

SALES DISTRIBUTION (MILLION BAHT)	2565A	2566F	2567F	2568F	2569F	2570F		
	2022A	2023F	2024F	2025F	2026F	2027F		
Total Sales	20,649	21,501	22,584	23,394	24,192	24,818		
1. Domestic	17,222	17,779	18,640	19,268	19,887	20,325		
2. Oversea	3,427	3,722	3,943	4,127	4,305	4,493		
% SALES MIX	2022A	2023F	2024F	2025F	2026F	2027F		
1. Domestic	83.40%	82.69%	82.54%	82.36%	82.20%	81.89%		
2. Oversea	16.60%	17.31%	17.46%	17.64%	17.80%	18.11%		
Paint and Coating: Domestic	2565A	2566F	2567F	2568F	2569F	2570F	AVG 2018-2022	Assumption
	2022A	2023F	2024F	2025F	2026F	2027F		
Size of paint and coating industry - Domestic (million Baht)	32,126	33,164	34,772	35,942	37,097	37,913		
- Industry Growth (CAGR)	3.34%	3.23%	4.85%	3.36%	3.22%	2.20%	2.21%	0.74%
TOA Paint and coating sales	17,221.96	17,778.66	18,640.45	19,267.63	19,887.13	20,324.59		
- Growth	15.82%	3.23%	4.85%	3.36%	3.22%	2.20%		
Implied TOA Market Share from Industry Sales	53.61%	53.61%	53.61%	53.61%	53.61%	53.61%		
Nominal GDP Size (BtBn)	17,079.65	17,999.82	19,454.01	20,544.94	21,645.89	22,439.48		
Nominal GDP Growth	5.56%	5.39%	8.08%	5.61%	5.36%	3.67%	1.23%	
Real GDP Growth	3.33%	4.29%	3.82%	3.35%	3.23%	3.06%	180%	60%

For the domestic sales, the sales have been projected from TOA's implied market share, the industry growth and Nominal GDP. For the first factor, it is about the paint and coating TOA implied market share. The available of information are the market shares in 2016 from Forst & Sullivan research, TOA represented 48.7% of decorative market and 28.2% of Wood coating, 20% of waterproofing coating and 28% of protective coating. TOA's main revenue is also from the decorative product of 63% of total sales.

Figure 4.1: TOA's market share in Thailand



Source: TOA opportunity day Q1/2018

For calculations of market shares, the main competitors have been added into the total market shares. According to DBD warehouse, total revenues from each company are combined as total market shares, while other companies' market shares are assumed to be equal since 2016. Therefore, the latest market share of TOA are around 47.83% for the total paint and decorative industry in Thailand as Figure 4.1.

According to Table 4.1, total market shares of the year 2022 are projected from the total market shares of 2021 amount to 31,088.23 million Baht, and there is no actual market size from in 2022 yet. Therefore, for the industry growth in 2022, actual average growth is applied together with the effect of nominal GDP, which mean that the market size of this industry in 2022 is 32,126 million Baht. For the projection period, market size of the industry, as mentioned that we applied growth from the effect of nominal GDP growth from the IMF source which is 1.23%, averaging from the year 2018 to 2021. Market size growth is around 180% of the average nominal GDP growth from the same period. However, in long term, it would be too high if the industry growth is 180% of the nominal GDP growth; therefore, the assumption was set to divide by 3 to lower the effect of nominal GDP growth to the industry growth and to represent the

realistic situation. Therefore, industry growth will be 60% of nominal GDP growth for the projection year.

Regarding the TOA's market shares, to compare with actual sales of TOA in 2022, TOA represented 53.61% market share instead, which increased from the year 2021; however, this is supported by the TOA's growth after COVID-19. Therefore, 53.61% will be taken as TOA's market share of the forecast years. To calculate the revenue of TOA, the implied market shares of 53.61% is multiplied by predicted market size of the domestic market, and the result is as in the Table 4.1 as above.

Table 4.2: Paint and coating domestic market share calculation

	2560A 2017A	Market share	2561A 2018A	Market share	2562A 2019A	Market share	2563A 2020A	Market share	2564A 2021A	Market share
TOA	13,645.78	47.57%	14,016.55	47.03%	14,650.61	53.28%	14,050.42	47.43%	14,869.90	47.83%
AKZO NOBEL PAINTS	3,701.44	12.90%	4,386.60	14.72%	4,455.05	16.20%	4,299.32	14.51%	4,426.21	14.24%
BEGER	3,426.42	11.94%	3,462.33	11.62%	3,811.16	13.86%	3,794.57	12.81%	3,827.16	12.31%
Jotun	3,521.32	12.28%	3,503.91	11.76%	3,240.75	11.79%	2,986.85	10.08%	3,350.37	10.78%
Nippon	1,229.99	4.29%	1,274.49	4.28%	1,339.70	4.87%	1,330.60	4.49%	1,454.50	4.68%
Other	3,160.09	11.02%	3,160.09	10.60%	0.11	0.00%	3,160.09	10.67%	3,160.09	10.16%
	28,685.04	100.00%	29,803.98	100.00%	27,497.37	100.00%	29,621.86	100.00%	31,088.23	100.00%

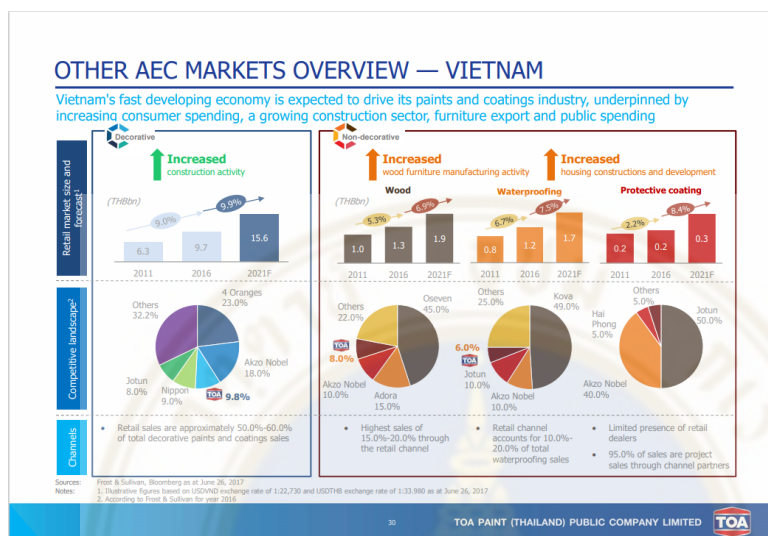
Table 4.3: Paint and Coating industry - Overseas Sales breakdown

Oversea - ASEAN (Vietnam, Indonesia, Myanmar, Cambodia, Laos, Malaysia and Singapore)	2565A 2022A	2566F 2023F	2567F 2024F	2568F 2025F	2569F 2026F	2570F 2027F	AVG 2018-2022	Assumption
Size of paint and coating industry - ASEAN (million THB)	86,513.28	93,950.9	99,530.8	104,158.6	108,672.1	113,420.9		
- Industry Growth plus exchange rate effect (CAGR)	8.16%	8.60%	5.94%	4.65%	4.33%	4.37%	8.28%	2.76%
TOA Paint and coating sales	3,427	3,722	3,943	4,127	4,305	4,493		
- Growth	26.92%	8.60%	5.94%	4.65%	4.33%	4.37%		
Implied TOA Market Share from Industry Sales	3.96%	3.96%	3.96%	3.96%	3.96%	3.96%		
Nominal GDP Size (BnUSD)	2,676.68	2,928.16	3,154.82	3,390.18	3,635.37	3,891.25		
Exchange rate effect	33.25	34.63	35.24	35.26	35.19	35.21		
Nominal GDP Size (Bn THB)	88,999.61	101,402.15	111,164.36	119,542.78	127,939.64	137,002.02		
Nominal GDP Growth	21.74%	13.94%	9.63%	7.54%	7.02%	7.08%	4.47%	
Real GDP Growth	185.22%	-20.54%	-10.39%	-12.00%	-9.09%	0.00%	185%	62%

For the overseas sales, the sales have been projected from TOA's implied market share, the industry growth and Nominal GDP as the same as the domestic product. The first factor is implied market share. TOA has exported to Vietnam the most comparing to other six countries including Indonesia, Myanmar, Cambodia, Laos, Malaysia and Singapore. The available of information are the market share in 2016 from

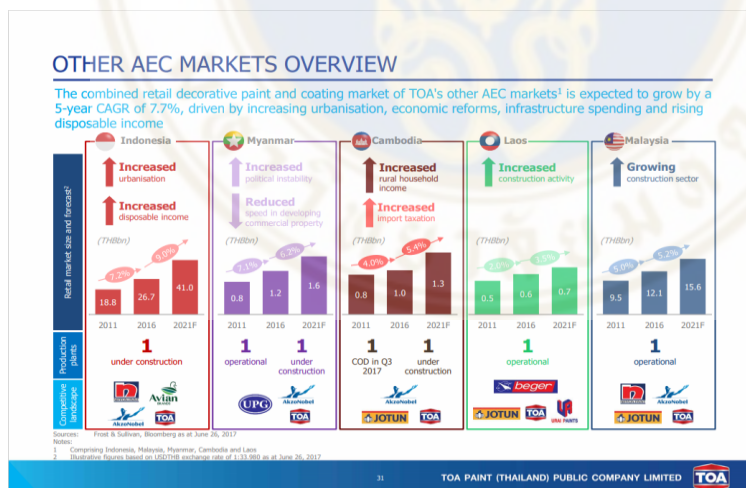
Forst & Sullivan research, TOA represented 9.8% of Vietnam's decorative market and 8% of Wood coating, 6% of waterproofing coating, 6% of waterprooing coating.

Figure 4.2: Vietnam market overview



Source: TOA opportunity day Q1/2018

Figure 4.3: AEC market overview



Source: TOA opportunity day Q1/2018

Table 4.4: Paint and coating overseas revenues calculation.

Exported countries	2560A	2561A	2562A	2563A	2564A	2565A
	2017A	2018A	2019A	2020A	2021A	2022A
Vietnam - decorative	10,660.30	11,715.67	12,875.52	14,150.20	15,551.07	17,090.62
Vietnam - wood	1,389.70	1,485.59	1,588.09	1,697.67	1,814.81	1,940.04
Vietnam - waterproof	1,290.00	1,386.75	1,490.76	1,602.56	1,722.76	1,851.96
Vietnam	13,340.00	14,588.01	15,954.37	17,450.43	19,088.64	20,882.62
Indonesia	29,103.00	31,722.27	34,577.27	37,689.23	41,081.26	44,778.57
Myanmar	1,274.40	1,353.41	1,437.32	1,526.44	1,621.08	1,721.58
Cambodia	1,054.00	1,110.92	1,170.91	1,234.13	1,300.78	1,371.02
Laos	621.00	642.74	665.23	688.51	712.61	737.55
Malaysia	12,729.20	13,391.12	14,087.46	14,820.00	15,590.64	16,401.36
Singapore	-	481.69	467.84	503.20	594.18	620.57
Total Market Shares	58,121.60	63,290.15	68,360.41	73,911.96	79,989.18	86,513.28

According to Forst & Sullivan research, there is market size information only in 2016 and expected CAGR for the forecast years. Therefore, market size is assumed to be growth at the specified level. For Vietnam, the industry will grow around 9.9% for the decorative and 6.9% to 8.4% for the non-decorative product. For other countries, the growth rates are as follow: 9% for Indonesia, 6.2% for Myanmar, 5.4% for Cambodia, 3.5% for Laos and 5.2% for Malaysia. For Singapore, there is no information in the research; however, the market size is obtained from Statista as in the Table 4.4. After the market size is defined, TOA's overseas revenue accounted for 3.96% of total sales in 2022 and this number will be applied for the forecast year.

Another factor is industry growth. The industry grew following the nominal GDP growth as in the domestic market. Seven countries GDP has been combined to see the GDP growth and the exchange rate is already affected in the calculation. To be shown in Table 4.4, the information of nominal GDP growth of overseas market is averaged from 2018 to 2022, which the result is 4.47% and the industry growth is represent 185% higher for the same period. However, in long term, it would be too high if the industry growth is 185% over the nominal GDP growth; therefore, the assumption was set to divide by 3 to lower the effect of nominal GDP growth to the industry growth and to represent the realistic situation. Therefore, industry growth will be 62% of nominal GDP growth for the projection years.

Then, TOA's overseas revenue is projected for the next five years as shown in the Table 4.4.

4.2.1.2 Cost of goods sold

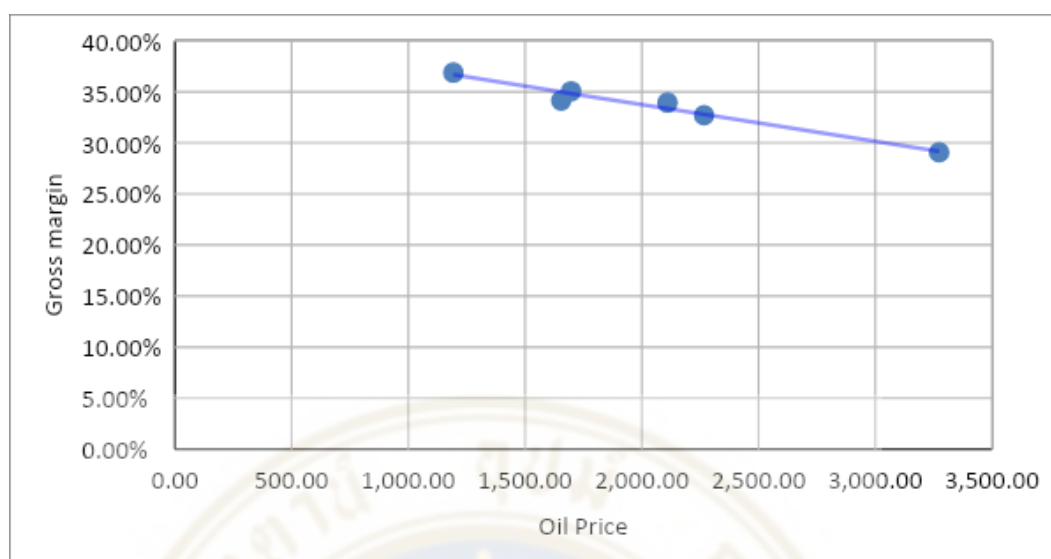
For the cost structure, the company has the same cost structure for both domestic and overseas since the company has their own plant in overseas countries. Therefore, the cost structure will be affected by the raw material prices. The main raw material of the paint and coating product is Titanium dioxide, which is correlated with the oil price. Therefore, predicted oil price changes represent the changes of the main raw material as well. In addition, the company imports raw materials; therefore, the prediction of exchange rate will be applied in the calculation. As below table, the historical gross margin from the TOA's actual information from 2017 to 2022 together with the historical crude oil price from Macrotrends website from the same period.

Table 4.5: Past performance of TOA's Gross margin

Gross Margin	Estimated				Given	
	2017	2018	2019	2020	2021	2022
1. Domestic	34.14%	33.94%	35.06%	36.87%	32.71%	29.08%
2. Oversea	34.14%	33.94%	35.06%	36.87%	32.71%	29.08%
Gross Margin (sum of Products)	34.14%	33.94%	35.06%	36.87%	32.71%	29.08%
Gross Margin from Financial Statement (with exchange rate effect)	34.14%	33.94%	35.06%	36.87%	32.71%	29.08%

Raw material of paint and coating is correlated with the oil price						
Year	2017	2018	2019	2020	2021	2022
Crude oil price	50.80	65.23	56.99	39.68	68.17	94.53
Exchange rate effect	32.57	32.35	29.78	30.06	33.25	34.63
Thai Baht price	1,654.56	2,110.19	1,697.16	1,192.78	2,266.65	3,273.57
- % YoY Change		28.41%	-12.63%	-30.37%	71.80%	38.67%
- % YoY Change with exchange rate effect		27.54%	-19.57%	-29.72%	90.03%	44.42%

After combining the historical oil price and, the regression is run to predict the gross margin. R-square is 99.3% which is very high and it means that there is high correlation in the graph.

Figure 4.4: R-Square graph for gross margin projection

For the forecast gross market, then, the predicted crude oil price obtained from CMEgroup website for the period of the year 2022 to 2027 and the exchange rate effect obtained from the useforecast website for the same period. The information of the forecast year is shown as below table.

Table 4.6: Oil price forecast

Raw material of paint and coating is correlated with the oil price						
Year	2022	2023F	2024F	2025F	2026F	2027F
Crude oil price	94.53	79.06	75.16	68.68	64.08	60.35
Exchange rate effect	34.63	35.24	35.26	35.19	35.21	35.21
Thai Baht price	3,273.57	2,785.75	2,650.26	2,416.88	2,256.11	2,124.71
- % YoY Change	38.67%	-16.37%	-4.93%	-8.63%	-6.69%	-5.82%
- % YoY Change with exchange rate effect	44.42%	-14.90%	-4.86%	-8.81%	-6.65%	-5.82%

For the forecast gross market, the regression is applied with the forecast information of crude oil price and exchange rate. Therefore, the predicted gross margin is as below table.

Table 4.7: Gross margin forecast

Gross Margin	Given	Forecast				
	2022	2023F	2024F	2025F	2026F	2027F
1. Domestic	29.08%	29.83%	30.37%	31.30%	31.95%	32.47%
2. Oversea	29.08%	29.83%	30.37%	31.30%	31.95%	32.47%
Gross Margin (sum of Products)	29.08%	29.83%	30.37%	31.30%	31.95%	32.47%
Gross Margin from Financial Statement (with exchange rate effect)	29.08%	29.83%	30.37%	31.30%	31.95%	32.47%

At the end, the forecast gross margin is applied to back to sales revenue forecast and then the cost of sales is as shown in the financial summary in table 4.2.5:

Financial statement of the current fiscal year and forecast next 5 years

4.2.1.3 Selling and Administrative expenses

Based on historical data, selling expenses to total revenue is around 12.4 - 14.0%; however, the company reduced their Selling expenses for the two consecutive period of 2021 and 2022 to around 12%; therefore, 12.5% for the selling expenses to total revenue for the forecast period is set as assumption. For administrative expenses, the historical data, administrative expenses to total revenue is around 6-8%; however, the most common rate is around 6 -7%. Therefore, 6.5% for the administrative expenses to total revenue for the forecast period is set as assumption.

Table 4.8: Selling and administrative expenses forecast

SELLING AND ADMINISTRATIVE COSTS						
Year	2022	2023F	2024F	2025F	2026F	2027F
SELLNG EXPENSES	2,604	2,688	2,823	2,924	3,024	3,102
ADMIN EXPENSES	1,397	1,398	1,468	1,521	1,573	1,613
- % change	19.58%	3.22%	5.04%	3.59%	3.41%	2.59%
SELLNG EXPENSES / TOTAL REVENUE	12.61%	12.50%	12.50%	12.50%	12.50%	12.50%
ADMIN EXPENSES / TOTAL REVENUE	6.77%	6.50%	6.50%	6.50%	6.50%	6.50%

4.2.1.4 Finance Cost and tax expenses

For the finance cost, it was calculated from the effective interest rate around 2.88%; however, the company has only current portion of interest-bearing debt remaining

in 2023 and the company has no need to borrow after that period. For the tax expenses, 20% will applied following the corporate income tax rate.

Due to the above assumption, he forecast income statement for the next 5 years between 2023 and 2027 as below table:

Table 4.9: Financial statement of the current fiscal year and forecast next 5 years.

To further analysis whether the financial projections are reasonable, my forecasted EPS of the year 2023 and 2024 will be compared with the average EPS number from analysts' forecasts. The comparing table is as below:

Table 4.10: EPS analysis

EPS analysis	2023F	2024F
Analyst	1.09	1.20
From financial summary projection	0.90	1.00
Variance	21.42%	20.13%

TOA Paint (Thailand) Public Company Limited BAHT MILLION	2565 2022	2566F 2023F	2567F 2024F	2568F 2025F	2569F 2026F	2570F 2027F
TOTAL SALES	20,649	21,501	22,584	23,394	24,192	24,818
BY PRODUCTS	20,649	21,501	22,584	23,394	24,192	24,818
1. Domestic	17,222	17,779	18,640	19,268	19,887	20,325
2. Oversea	3,427	3,722	3,943	4,127	4,305	4,493
OTHER INCOME	176.70	-	-	-	-	-
TOTAL REVENUE	20,826	21,501	22,584	23,394	24,192	24,818
COST OF SALES	14,645	15,088	15,725	16,071	16,464	16,759
GROSS PROFIT	6,055	6,413	6,858	7,323	7,728	8,059
SELLING AND ADMIN. EXPENSES	4,001	4,085	4,291	4,445	4,597	4,715
- Selling	2,604	2,688	2,823	2,924	3,024	3,102
- Admin	1,397	1,398	1,468	1,521	1,573	1,613
OTHER EXPENSES	254					
EBIT	1,800	2,328	2,568	2,878	3,132	3,343
FINANCE INCOME	37	37	37	37	37	37
FINANCE COSTS	38	30.27	13.21	-	-	-
TAX	453	460	511	576	626	669
PROFIT	1,310	1,838	2,043	2,302	2,505	2,675
NON CONTROLLING INTERESTS	17	17	17	17	17	17
NET PROFIT TO EQUITY HOLDERS OF PARENT	1,293	1,821	2,027	2,286	2,489	2,658
NUMBER OF SHARES (MN)	2,029	2,029	2,029	2,029	2,029	2,029
EARNINGS PER SHARE (BT)	0.64	0.90	1.00	1.13	1.23	1.31

For the EPS forecast from analysts for the year 2023, the average of EPS is 1.09 Baht per share with the lowest of 1.04 Baht per share and the highest of 1.12 Baht per share.

However, from my calculation, the forecast EPS of 2023 is 0.90 which is about 21% below the average from the analysts, but only 16% lower from the lowest one.

For the EPS forecast from analysts from the year 2024, the average of EPS is 1.20 Baht per share with the lowest of 1.19 and the highest of 1.20 Baht per share. However, from my calculation, the forecast EPS of 2023 is 1.00 Baht per share which is about 20% below than the average from the analysts, and 19% lower from the lowest one.

For the forecast EPS from analysts, the range is not that wide in both years since the company TOA is quite stable in term of growth and margin. However, from my calculation, the number is lower due to the more conservative assumptions on the revenue growth forecast. However, the difference is roughly 20%, which is acceptable for the range of projection.

Figure 4.5: Other analysts' analysis

โบรกเกอร์	นักวิเคราะห์	กำไรต่อหุ้น (บาท)		กำไรสุทธิ (ล้านบาท)		P/E (เท่า)		P/BV (เท่า)		DIV (%)		ราคาเป้าหมาย (2024F)	เบี่ยงเบนค่า (เบี่ยงเบนค่า (%))	แนะนำ
		2023F	2024F	2023F	2024F	2023F	2024F	2023F	2024F	2023F	2024F			
	Average	1.09	1.20	2,201.95	2,429.64	29.04	26.32	4.58	4.25	1.90	2.18	39.40	0.00 (0.00%)	
	Median	1.10	1.20	2,229.00	2,430.96	28.64	26.29	4.58	4.23	1.75	1.90	40.00	0.00 (0.00%)	
	High	1.12	1.20	2,268.83	2,438.96	30.40	26.47	4.61	4.31	2.43	2.73	41.00	- (-)	
	Low	1.04	1.19	2,102.33	2,419.00	28.17	26.21	4.53	4.22	1.64	1.90	38.00	- (-)	
CNS	Anuwat Srikajornratkul	1.07	1.20	2,172.15	2,438.96	29.42	26.21	4.58	4.31	2.43	2.73	41.00	0.00 (0.00%)	Buy
FSSIA	Thanyatorn Songwutti	1.10	1.19	2,229.00	2,419.00	28.64	26.47	4.60	4.23	1.75	1.90	40.00	- (-)	Buy
TISCO	Sansanee Sriamjuree	1.10	-	2,237.44	-	28.57	-	4.56	-	1.75	-	40.00	0.00 (0.00%)	Buy
KS	Tan Chirasittikorn	1.04	1.20	2,102.33	2,430.96	30.40	26.29	4.61	4.22	1.64	1.90	38.00	0.00 (0.00%)	Outperform Market
TNS	Saksid Phadthananarak	1.12	-	2,268.83	-	28.17	-	4.53	-	1.95	-	38.00	- (-)	Buy

Source: SET

4.2.2 FCFF projections

Table 4.11: Free Cash Flow to Firm

PERIOD	0	1	2	3	4	5	Terminal Value
	2022	2023F	2024F	2025F	2026F	2027F	
EBIT	1,800	2,328	2,568	2,878	3,132	3,343	
TAX	(360)	(466)	(514)	(576)	(626)	(669)	
EBIT AFTER TAX	1,440	1,862	2,054	2,302	2,505	2,675	
DEPRECIATION	670	650	500	500	500	500	
WORKING CAPITAL CHANGE	(1,025)	255	(149)	(121)	(115)	(91)	
CAPEX	(562)	(500)	(500)	(500)	(500)	(500)	
CASHFLOW TO THE FIRM	523	2,267	1,905	2,182	2,390	2,583	96,738.63
DISCOUNTED CASHFLOW	523	2,128	1,678	1,804	1,855	1,882	70,485
PV OF FIRM VALUE	80,355	million					
NET DEBT	1,237						
PV OF EQUITY VALUE	79,118						
# OF SHARES (MN)	2,029						
EST. SHARE VALUE	38.99						

The base year is 2022, which is called year 0 and this valuation calculation will forecast to the next 5 years including 2023 to 2027.

The formula of Free Cash Flow to Firm is as below:

$$\text{FCFF} = (\text{EBIT} \times (1 - \text{tax rate})) + \text{Depreciation} - \text{Working Capital investment} - \text{Fixed Capital Investment}$$

For the first line, EBIT, Earnings Before Interest and Taxes, comes from the projection of income statement as in the first part, referring to Table 4.9.

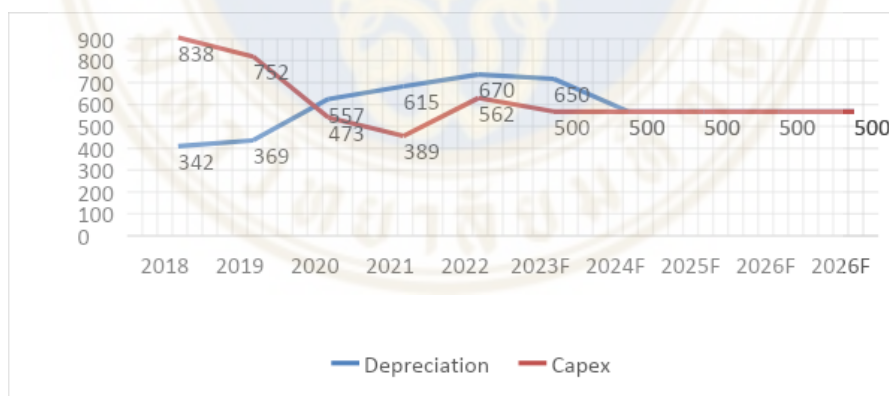
For tax expenses, as assumption, the corporate income tax in Thailand is at flat rate of 20%; therefore, the rate applied to the EBIT for adjustment as in table 4.10.

For Depreciation and fixed capital investment (CAPEX), the latest number of the CAPEX in 2022 amounted to 562 million, TOA has a plan to use the IPO money to expand their plant since 2018 and depreciation rate is around 14-15% of the fixed asset. For the calculation in forecast period, the company historically invest in the fixed asset around 500million each year, except the few years after IPO period. Therefore, for the forecast period until the terminal growth year, the company would invest in CAPEX at the same rate of depreciation. The reason is just to maintain the fixed asset for stable growth. The information is as below table:

Table 4.12: Depreciation and CAPEX forecast

year	2022	2023F	2024F	2025F	2026F	2026F
Depreciation	670	650	500	500	500	500
Capex	562	500	500	500	500	500

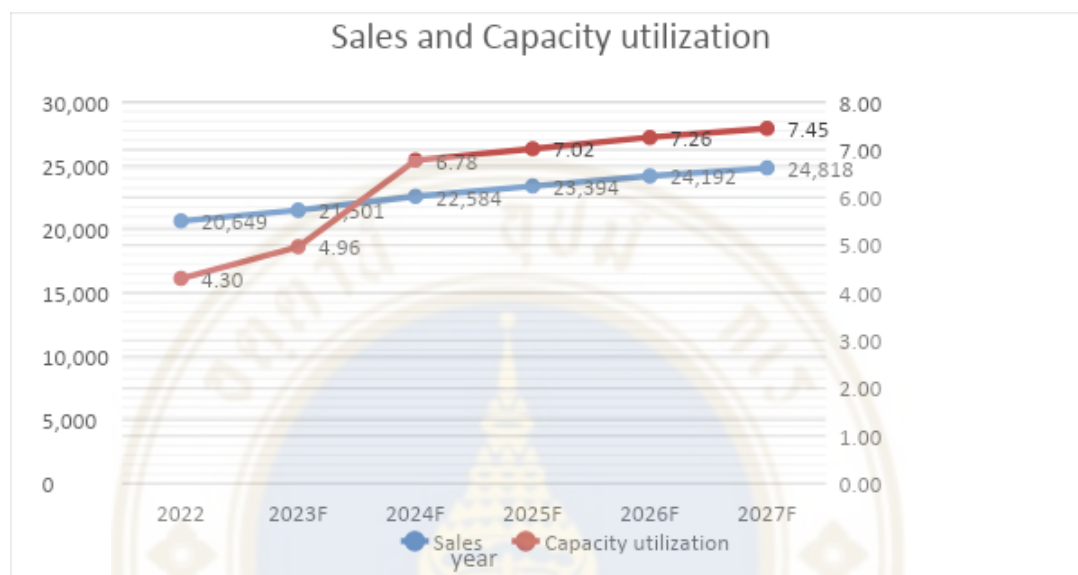
Figure 4.6: Graph of depreciation and CAPEX forecast



In addition, to make sure that the investment in CAPEX is enough for the sales growth, at the last year, the ratio of capacity utilization is about the sales increase and a little bit higher to cover to sales capacity.

Table 4.13: Sales and Capacity utilization forecast

year	2022	2023F	2024F	2025F	2026F	2027F
Sales	20,649	21,501	22,584	23,394	24,192	24,818
Capacity utilization	4.30	4.96	6.78	7.02	7.26	7.45

Figure 4.7: Graph of sales and capacity utilization forecast

For the last factor in the FCFE, working capital, is calculated from AR turnover, AP turnover and inventory turnover. The company has cash cycle around 40 days on average; therefore, the average days outstanding of each ratio to find the turnover and the balance of accounts receivable, accounts payable and inventory to find out the working capital that the company has to use every period. The working capital increase or decrease is as below table:

Table 4.14: Working capital and cash cycle

	2565 2022	2566F 2023F	2567F 2024F	2568F 2025F	2569F 2026F	2570F 2027F
WORKING CAPITAL						
A/C RECEIVABLES	3,640	3,829	4,022	4,166	4,308	4,420
INVENTORY	3,293	3,100	3,231	3,302	3,383	3,444
A/C PAYABLES	3,882	4,134	4,308	4,403	4,511	4,592
WORKING CAPITAL	3,051	2,795	2,945	3,065	3,181	3,272
WORKING CAPITAL CHANGE	(1,025)	255	(149)	(121)	(115)	(91)
AC RECEIVABLE DAYS	61	65	65	65	65	65
INVENTORY DAYS	74	75	75	75	75	75
AC PAYABLE DAYS	96	100	100	100	100	100
CASH CYCLE	38	40	40	40	40	40

4.2.3 Terminal growth rate of FCFF

Terminal growth rate of TOA combined from two growth rates which are domestic growth rate and overseas growth rate.

Table 4.15: Terminal growth rate

	2565 2022	2566F 2023F	2567F 2024F	2568F 2025F	2569F 2026F	2570F 2027F	CARG 2018-2021	CARG 2022-2027
- Domestic	17,222	17,779	18,640	19,268	19,887	20,325	1.49%	3.37%
- Overseas	3,427	3,722	3,943	4,127	4,305	4,493	3.76%	5.57%
- Domestic / Total Sales	83.40%	82.69%	82.54%	82.36%	82.20%	81.89%		
- Overseas / Total Sales	16.60%	17.31%	17.46%	17.64%	17.80%	18.11%		

	LT Growth	PROP. Sales in
Terminal growth rate	3.77%	
Domestic Sales	3.37%	81.9%
Oversea market	5.57%	18.1%

The last year of projection, 2027F, the company would have proportion of domestic and overseas sales at 81.89% and 18.11% respectively. The CAGR 2022-2027 of domestic sales is around 3.37% and for overseas market is around 5.57%. Therefore, to weigh proportion of final growth of domestic and overseas market, the terminal growth rate is around at 3.77%. This is a little bit higher than the GDP growth; however, based on TOA historical performance, the company always performed better than the GDP growth and due to very high market share in Thailand, the company could grow at this rate if the environment still grew such as the construction expansion in Thailand in the future. In addition, in the overseas markets, the company could still have ability to expand their sales against the competitors since the company still has low market share over there and the market is quite big for further growth.

4.2.4 WACC

WACC is the discount rate for FCFF, the formula is as below:

$$\text{WACC Formula} = (E/V * K_e) + (D/V) * K_d * (1 - \text{Tax rate})$$

4.2.4.1 Capital structure (weights of debt and equity)

For the weight of total debt and total equity, as at 30 Dec 2022, the company has equity market value of 68,479 million Baht and the market debt value, including only interest-bearing debt of 1,237 million Baht. To calculate the proportion for the Net debt and Net Equity are 1.78% and 98.22% respectively. Therefore, the company is mainly financed by equity rather than debt.

Table 4.16: Capital structure

Share price as of 30 Dec 2022	33.75
# shares (Mn)	2,029
Equity Value (BtMn)	68,479
Net Debt (BtMn) as of 31 Dec 2022	1,237
NET DEBT / (EQUITY + NET DEBT)	1.78%
NET Equity / (EQUITY + NET DEBT)	98.22%

4.2.4.2 Cost of equity estimate

The cost of equity formula is as below:

Cost of Equity = Risk-Free Rate of Return + Beta × Equity Market risk premium

Risk free rate is 2.59%, which is the rate from 10-year bond yield as of 5 Mar 2023.

Equity risk premium is 4.83%, which is the rate from Refinitiv Eikon website with the latest update on 5 Mar 2023.

Beta is 0.83 which is the Beta of the company from SetTrade as of 5 Mar 2023.

To calculate the cost of equity, the K_e is equal to 6.59%.

4.2.4.3 Cost of debt

For the cost of debt (K_d), the formula is as below:

$$\text{after-tax cost of debt} = \text{effective interest rate} * (1 - \text{tax rate})$$

The company's cost of debt is obtained from the notes to financial statement of the year 2022 with the range between 3.00 -4.85%. To apply cost of debt in the formula, the range has been averaged, and the result is 3.925% for the cost of debt of the company. Then, the cost of debt will be subject to 20% tax rate. Therefore, the rate was deducted by 20%. As a result, the after-tax cost of debt is around 3.14%.

4.2.4.4 WACC estimate

Table 4.17: WACC

WACC		Remark
RISK FREE	2.590%	5-Mar-23
EQUITY RISK PREMIUM	4.830%	5-Mar-23
BETA	0.83	5-Mar-23
RQD. RETURN ON EQUITY	6.599%	
COST OF DEBT	3.925%	
Tax	20.000%	
AFTER TAX COST OF DEBT	3.140%	
WACC	6.537%	

To combine the factors together, WACC is calculated to be 6.54% to use as the discount rate of the company valuation.

4.2.5 DCF Valuation Result

4.2.5.1 Discounted cash flow valuation

Table 4.18: Discounted cash flow

PERIOD	0	1	2	3	4	5	Terminal
	2022	2023F	2024F	2025F	2026F	2027F	
CASHFLOW TO THE FIRM	523	2,267	1,905	2,182	2,390	2,583	96,738.63
DISCOUNTED CASHFLOW	523	2,128	1,678	1,804	1,855	1,882	70,485
PV OF FIRM VALUE	80,355	million					
NET DEBT	1,237						
PV OF EQUITY VALUE	79,118						
# OF SHARES (MN)	2,029						
EST. SHARE VALUE	38.99						

The cash flow to firm is reference from the section 4.2.2 as above table.

For the terminal value, the formula is as below:

$$(\text{FCF} \times (1 + g)) / (d - g)$$

Where

FCF = free cash flow for the last forecast period (2027)

g = terminal growth rate (refer to 4.2.3)

d = discount rate (refer to 4.2.4.4)

To calculate the terminal value with the terminal growth rate of 3.77% and discount rate of 6.54% and free cash flow the last forecast period of 2,583 million Baht. The terminal value is 96,738.63 million Baht.

After get the cash flow to the firm, discount rate or WACC has been applied in each period, and then Present value of the firm is 80,355 million Baht. To divide by the number of shares of 2,029 million shares, the estimate share value is 38.99 Baht per share.

4.2.5.2 Sensitivity analysis

Table 4.19: Sensitivity analysis

Deviation	Cost of debt	Price (Baht)	Cost of Equity	Price (Baht)	WACC	Price (Baht)	Terminal growth	Price (Baht)
		38.99		38.99		38.99		38.99
50%	4.71%	38.60	9.90%	17.65	9.81%	17.57	5.65%	114.65
40%	4.40%	38.68	9.24%	19.85	9.15%	19.77	5.27%	81.49
30%	4.08%	38.76	8.58%	22.66	8.50%	22.58	4.90%	63.55
20%	3.77%	38.83	7.92%	26.37	7.84%	26.30	4.52%	52.31
10%	3.45%	38.91	7.26%	31.49	7.19%	31.43	4.14%	44.60
5%	3.30%	38.95	6.93%	34.85	6.86%	34.81	3.95%	41.59
0%	3.14%	38.99	6.60%	38.99	6.54%	38.99	3.77%	38.99
-5%	2.98%	39.03	6.27%	44.24	6.21%	44.29	3.58%	36.72
-10%	2.83%	39.07	5.94%	51.09	5.88%	51.23	3.39%	34.73
-20%	2.51%	39.15	5.28%	73.82	5.23%	74.39	3.01%	31.37
-30%	2.20%	39.23	4.62%	132.22	4.58%	134.96	2.64%	28.66
-40%	1.88%	39.31	3.96%	615.07	3.92%	703.03	2.26%	26.43
-50%	1.57%	39.40	3.30%	N/A	3.27%	N/A	1.88%	24.56

4.2.6 Implied WACC**Table 4.20: Implied WACC**

Stock price (Baht)	Terminal growth	Implied WACC	Implied Cost of Equity
31.00	3.77%	7.24%	7.31%
31.00	3.00%	6.57%	6.63%
31.00	2.00%	5.69%	5.74%
31.00	0.00%	3.97%	3.99%

To calculate the implied WACC, setting the stock price as at 31 Baht per share dated 3 March 2023, for the same terminal growth rate, implied WACC would

increase to 7.24% instead of 6.54%. Therefore, the investor could expect the return more if investing in the today's stock price, which mean that the stock price is undervalued. However, when setting the terminal growth rate at 0%, the implied WACC rate reduce to 3.97%. It means that the price will be overvalued when there is no growth from the terminal year onwards.

In addition, in case, the terminal growth rate is at the same as forecast inflation rate of 2% from Statista website, the implied WACC rate also reduce to 5.69%, which means the price will be also overvalued if the growth rate is at 2%.

Lastly, 3% of terminal growth rate is applied and the result is implied WACC is a little bit higher, which is 6.57% which is a little bit higher than 6.54% of the estimated WACC one, which means that at 3% growth rate, the stock price is undervalued.

Therefore, it could be seen that the company should have around 3% growth and above to keep the target price higher than the current market price of 31 Baht per share.

4.3 Valuation recommendation

Table 4.21: Valuation recommendation range

Recommendation	% change from market price	Target price (THB)	Market price (THB)
Buy	>15%	35.65	31.00
Hold	+/-15%	26.36 - 35.64	
Sell	<-15%	26.35	

From the recommendation table, if the target price is above market price over 15%, I recommend to buy; however, if the target price is below than market price over 15%, I would recommend to sell. In case, the target price is in between the range, I would recommend to hold. From above analysis, the current stock price, which is 31

THB, while the target price is at 38.99 Baht; therefore, there is an upside around 25.79% to reach the target price. Therefore, I would recommend to “BUY” TOA stock.

In addition, to look into the detail of further analysis from analysts, the target price in 2024 is around 39.40 Baht per share with the lowest of 38 Baht per share and the highest of 41 Baht per share, which could support the “BUY” recommendation from the above analysis in Figure 4.5.



CHAPTER V

INVESTMENT RISKS

In this chapter, the possible investment risks of TOA will be clarified into the following risk aspects.

5.1 Strategic risks

To become leader in this industry, the company should outperform its competitors by revising its strategies continuously. Obviously, the company need to develop its innovation and technologies quickly in order to enhance its competitiveness and create brand awareness in both domestic and international markets. Moreover, customer preferences are changing all the time. For example, several customers prefer odorless paint that have a mild scent or chemical-free which it is safe for everyone in the house by reducing the risk of respiratory disease. Therefore, it requires development continuously in order to respond to customer wants and needs.

5.2 Exchange rate risks

TOA has overseas factories and operates business worldwide, such that a change in the exchange rate will impact the company. TOA purchases raw materials from distributors in Thailand and imports from overseas such as Singapore, Taiwan, US, and Australia. Furthermore, it exports to other countries such as Vietnam, Laos, and Malaysia which its receivables will be in foreign currency. As TOA is both importer and exporter, the company will face with the risk of fluctuations in exchange rates. If the Thai baht depreciates against other currencies, TOA's raw materials price will be more

expensive leading to a higher cost of goods sold which can decrease the company's net profit.

5.3 Economic risk

In the future, if the economy contracts in a recession period, it could lead to a decreased in demand for TOA's products as well as a declining in purchasing power of customers.

5.4 Operational risks

The company faces external factors that the company cannot control, regarding the force majeure risks including natural disasters, fires, wars, and riots. For example, there are political riots in Myanmar, which may cause the operation in that area has to stop and the factory might not be well-maintained. Therefore, the loss could occur and would affect to the company revenue and its profit. In addition, for the emerging risk on the aging society, this would affect the turnover rate of the company since the expertise and skills workforce will retire at the higher and would cause the expertise's shortage including the high skill labor shortage. This will definitely affect to the company operation and the cost of hiring and training would be higher due to the above situation.

5.5 Environmental risks

To become the product innovation, regarding the sustainability direction, the risk occurs when the cost of raw materials and cost of operations might be higher when the company has to change the operation to be more environmentally friendly to the society, and has to concern about reducing its consumption of resources and energy. In addition, regarding the materials, the company want to develop products to be more

environmentally friendly. For both issues, it could affect the company net income in the near future.



CHAPTER VI

CONCLUSION

6.1 Investment recommendation

After estimating the discounted cash flow (DCF) model for TOA, I recommended to “BUY” TOA stock due to the following reasons:

First, the target price from DCF is 38.99 Baht per share which is 25.79% upside from the current market price of 31 Baht. In addition, the analysts also gave the recommendation in the same direction, which is to “BUY” this stock and target price is around 40 Baht.

Secondly, TOA has strong market share in this industry in Thailand. TOA has about 50% market share and is the leader in the paint industry in Thailand. In addition, according to the annual report, due to their high brand recognition and their incumbency as a large manufacturer, it might be difficult to reduce their market share. For further explanation, their revenue has been continually growing. Even during the COVID-19 pandemic, the revenue has not decreased.

Third, TOA still has room to expand overseas since the current market share in overseas or ASEAN countries is quite low and there are potential markets to expand, especially in AEC since there is relatively high growth in foreign investments and other developments which could lead to increased demand for paint and coating products. In addition, TOA also expands to other products such as gypsum and other construction materials, and tries to provide the “Total Solution” for the construction.

Lastly, TOA is the leader in product innovation to be more environmentally friendly, which is following the current the trend of sustainability, and customers might be more concerned on their health. TOA could increase their sales from such product innovation.

6.2 Triggers for re-assessment

Frist is the change of cost of equity and WACC. These factors show the same effect to the stock price since the cost of debt is rarely affected to the stock price, even increase or decrease by 50%. According to the sensitivity analysis, when the cost of equity and WACC increase, the prices have significantly decreased. The main factor is about risk-free rate and the market risk premium that would affect to the cost of equity and WACC. In the situation that there is high inflation, those rates might sharply increase and could lead to a sharp decrease in the stock price. Therefore, the re-assessment should be done in such a situation.

Another trigger would be the significant change in the expansion decision or situation. Currently, the company expands their service for total solution and expand their construction material product. In case, the expansion is not good as the company think and prediction of an increase in revenue might be significantly decreased and lead to the financial projection revision.

6.3 Limitations

There is some limitation on the information on the updated market shares of TOA in Thailand and also the information of market sizes in the oversea market. This could not be that up-to-date and might not represent the actual market shares of the company and could lead to over-prediction of future revenue growth. In addition, for the inside information rather than public information, I cannot access and there might be other factors that would affect to the assumptions on valuation price and lead to the change in the target price.

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