Financial Analysis: A comparison between Thai Textile Industry Public Company Limited and Lu Thai Textile Company Limited

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งบการเงินมีประโยชน์เนื่องจากช่วยระบุสภาพของบริษัทตลอดจนช่วยผู้ที่มีส่วนได้ส่วนเสียของบริษัทในการประเมินและตัดสินใจทางธุรกิจที่เหมาะสม โดยใช้การวิเคราะห์อนุกรมเวลา (เปรียบเทียบผลการดำเนินงานในอดีตและปัจจุบัน) และการวิเคราะห์เปรียบเทียบ (เปรียบเทียบผลการปฏิบัติงานของตนเองกับคู่แข่งหรือ มาตรฐานอุตสาหกรรม) การศึกษานี้จะประเมินประสิทธิภาพทางการเงินของบริษัทสิ่งทอ สองแห่งจากประเทศไทย บริษัทโรงงานผ้าไทย จำกัด (มหาชน) : TTI และประเทศจีน บริษัท ลู่ไทยเท็กซ์ไทล์ จำกัด : LTTC และเปรียบเทียบประสิทธิภาพของ TTI กับ LTTC อัตราส่วนทางการเงินที่ใช้ในการศึกษานี้คือ 1) อัตราการเติบโต 2) อัตรากำไร 3) อัตราส่วนวัดสภาพคล่องทางการเงิน 4) อัตราส่วนวิเคราะห์ความสามารถ ในการดำเนินงาน 5) อัตราส่วนความสามารถในการทำกำไร และ 6) อัตราส่วนวัดความสามารถในการชำระหนี้ ผลการศึกษาพบว่าอัตราการเติบโตของรายได้ อัตรากำไรขั้นต้น และสถานะสภาพคล่องทางการเงิน เป็นจุดอ่อนสามประการของ TTI และข้อแนะนำในการปรับปรุงหรือแก้ไขปัญหาหลักในสามด้านนี้เพื่อปรับปรุงสุขภาพทางการเงินของ TTI

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May Thu Htet : Financial Analysis: A comparison between Thai Textile Industry Public Company Limited and Lu Thai Textile Company Limited. Advisor: Asst. Prof. SAN SAMPATTAVANIJA, Ph.D.

Financial statements are useful since they help indicate condition of a company as well as help the company's stakeholders to evaluate and take appropriate business decisions by conducting time-series analysis (compare own past and current performance) and comparative analysis (compare own performance with competitors or industry standards). This study will evaluate the financial performance of two textile companies from Thailand (Thai Textile Industry Public Company Limited: TTI) and China (Lu Thai Textile Company Limited: LTTC) and compare the performance of TTI against that of LTTC. The financial ratios used in this study are: 1) growth rate, 2) profit margins, 3) liquidity ratios, 4) efficiency ratios, 5) profitability ratios and 6) solvency ratios. The study finds that revenue growth rate, gross profit margin and liquidity position are three areas of weakness of TTI, and it is recommended to improve or address the key issues in these three areas so as to improve TTI's financial health.

Field of Study:	Business and Managerial Economics	Student's Signature .....
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May Thu Htet

TABLE OF CONTENTS

Page

1. Introduction

The use of financial analysis varies with the purpose of an individual who does the analysis; a finance manager may use financial analysis to pinpoint the areas that needs an attention, a bank or a lender may use financial analysis to decide the creditworthiness of a company, and shareholders may use financial analysis to forecast earnings or dividends. The objective of this paper is to evaluate the financial performance of Lu Thai Textile Company Limited (LTTC) and Thai Textile Industry Public Company Limited (TTI) as well as to find out the key areas TTI may learn from LTTC to improve TTI's financial performance. TTI is chosen because although it is one of the earliest entrants into the industry, it has the weakest position among the publicly listed companies in the textile industry in Thailand with three consecutive years (from 2018 to 2020) experiencing a negative net income. Hence, it would be interesting to investigate and identify the weaknesses of this company through comparing with a top performer in the industry. LTTC is one of the largest textiles and garment manufacturer by revenue in China with approximate annual net income over CNY 800 million in 2018 before COVID-19 outbreak. Since the paper uses ratio analysis, although LTTC is substantially larger (in revenue) than TTI, the differences in size would not affect the study. Moreover, the revenue composition of LTTC is similar to TTI in terms of product offerings (such as fabric, cotton, and apparel) and the revenue attributable to these product offerings in percentage terms. The paper focuses financial performance of LTTC and TTI for the fiscal year 2016 to 2020. Financial data of the two companies for five years period was obtained from Stock Exchange Thailand (SET), Sina finance (SF) and Yahoo finance (YF). The financial data for five years were summarized and used to calculate the financial ratios which are instruments that measure the growth, liquidity, solvency, efficiency, and profitability of the two companies.

1.1. Literature Review

Financial statements are valuable since they precisely indicate the economic and financial status of a company. Furthermore, they help all stakeholders such as company's management, current and potential investors, and financial analysts to evaluate and take appropriate business decisions by comparing past and current performance as well as by comparing performance of one company with its competitors or the industry standards. For our literature review, we can approach the financial analysis from the following two perspectives: 1) Application and usefulness of financial ratios, and 2) Commonly used key financial ratios.

1.1.1. Application and Usefulness of Financial Ratios

Companies should compare current financial ratios not only with its past but also with other companies in the same industry as benchmark to assess its position in the industry not to obtain answers for the existing issues but to ask the right questions to address those issues (Brealey, Myers, & Allen, 2017). This aspect was supported by Castro and Chousa (2006) that financial analysis as well as ratios analysis can be regarded as a proper tool for indicating a company's financial and economic situation although the analysis methods had been criticized for relying on past accounting-based information.

According to the authors, Brealey, Myers, and Allen (2017), analyzing a firm's financial statement as well as ratios allowed the firm to – 1) measure performance of department and mid-management levels, 2) evaluate current position by comparing with past performance, 3) evaluate current position by comparing with rival firms, and 4) forecast future.

Apart from the benefits mentioned above, financial statement and ratio analysis can also be used as a tool for predicting failure of firms. Beaver (1966) studied the empirical verification of ability of financial statements and financial ratios in predicting a firm's failure. The paper employed data from Moody's Industrial Manual for selected failure firms and paired those firms with non-failed firms which were in the same industry and had similar assets size to test six group of

financial ratios (thirty ratios in total) – cash-flow ratios, net income ratios, debt-to-total assets ratios, liquid assets-to-total assets ratios, liquid assets-to-current debt ratios, and turnover ratios. The study proved that although not all ratios could predict equally well, the selected six group of financial ratios could be used as predictor of failure of a firm for at least five years prior to failure.

Ohlson (1980) stated that the size, measures of financial structure, measures of performance and measures of liquidity of a company could affect the probability of bankrupt throughout a one-year period. However, warning signals from accounting reports were not significant for bankrupt companies and some of those companies even paid out dividends to the shareholders one year before going into bankruptcy. For this issue, it was suggested that a time-series analysis would help the company to identify the existing risks.

Gupta and Huefner (1972) indicated that financial ratios could be applicable in various aspects such as firm level, industry level and country (total economy) level. At the firm level, firms were suggested to use industry average as well as group average (of similar characteristic industries) as a benchmark to evaluate own performance. At higher level, ratios that showed relationship between capital and output (or) revenue were more important since this level focused more on planning future investment requirements of an industry or the whole economy.

1.1.2. Commonly Used Key Financial Ratios

Net operating margin, gross profit margins, return on capital employed, return on assets, and return on equity are the most used ratios to indicate profitability of a firm (Samo & Murad, 2019). This paper suggested that obtaining too much debt financing would affect the profitability in a bad way. Firms with high debt and leverage ratios were risky and unable to generate (high) profit. Moreover, the paper also mentioned that focusing on liquidity management policies would help firms to manage cash circulation correctly to maintain financial stability.

On another perspective, debt was considered a signaling factor for a firm that was trusted by its investors. In other words, a firm taking loan gave an

impression to the market that it was anticipating positive cash-flows in the future (Ross, 1977, as cited in Rafique, 2011).

Muhammad, Jan, and Ullah (2012) argued that managing working capital as well as receivables collection effectively could lead to profitability growth of a firm. To obtain optimal level of working capital, the firm should balance profitability and liquidity positions and hence, the firm should consider several sources to arrange its current assets promptly in accordance with business activity changes. Funds invested in inventory or in receivables from customers were not liquid and consequently, slow collection of those assets led to inefficiency in operations. Since working capital indicate operational efficiency of the firm, slow collection might be a sign of problematic operations of the firm.

Lee, Lin, and Shin (2012) stated that working capital turnover, long-term debt-to-equity ratio, times interest earned ratio, cash-flow-to-net income ratio and cash-flow adequacy ratio were more significant than the other ratios for comparing selected major firms in Korea and Taiwan during 1999 to 2009.

Given that the performance of a firm was influenced mainly by two critical profitability ratios, which were earning before tax to equity and net profit margin, high ratios suggested high efficiency of the firm in terms of return on equity and assets (Delen, Kuzey, & Uyar, 2013). The authors also indicated that leverage ratios, debt ratios, revenue growth rate and assets turnover rates had considerable impact on the firm performance.

2. Background

2.1. World Textile industry

Textiles are products made from fibers, yarns, or threads, and can be produced through a number of methods, such as weaving, knitting, felting, and bonding. The textile industry is a huge international market and every country in the world is affected by it either directly or indirectly. The world total export on textile and garment was USD 798.8 billion in 2019, of which China accounted for approximately 34%, followed by EU and Vietnam accounting for 25% and

5% respectively (WTO, 2021). From the market analysis report of Grand View Research (GVR, 2021), the global textile (and garment) market is projected to grow at a Compound Annual Growth Rate (CAGR) of 4.4% from 2021 to 2028. There are many reasons for the increase in demand and production of textile and garment. One main reason is that the output of the industry – starting from basic needs such as clothing and home accessories for warmth and safety to fashion for social belonging and self-esteem – satisfies human needs. Moreover, the industry employs a significant portion of the labor force for many countries across the globe. Due to high labor costs comprised from labor shortage in developed countries, many textile and garment productions are now re-located or expended in the low labor cost countries, and governments of the developing countries welcome such factory re-locations as they help solve the employment problem of the home country (Sanchez, 1990).

2.2. Thailand Textile industry

With a long history of silk and cotton production, Thailand's textile and garment market is steadily growing. Based on The Office of Industrial Economics Thailand's industrial statistic (OiE, 2021), the production of textile and garment increased by THB 2 billion within two years from THB 88 billion in 2016 to THB 90 billion in 2018. However, the production was dropped to THB 84 billion in 2019 which can be attributed to the COVID-19 outbreak. Since the textile and garment market is a competitive market, Thailand has no other option but to compete with leading global textile manufacturers and also with those from ASEAN countries. According to World Trade Organization (WTO), Thailand ranked at the fifth position among ASEAN countries in 2019 with respect to textile and garment export, led by Vietnam, Indonesia, Cambodia and Malaysia, and followed by Myanmar, Singapore, Philippines, Lao and Brunei.

2.3. Thai Textile Industry Company Limited

Thai Textile Industry Company Limited was established in 1969 as a private company and became a publicly listed company in the Stock Exchange of Thailand (SET) in 1987. Thai Textile Industry Public Company Limited (TTI)

started its business as a private weaving factory and in later years, TTI invested more capital and expanded its business into other textile related functions such as spinning, sizing, yarn dyeing, and garment making. In present days, TTI integrated vertically the functions to produce fabric.

There are many textile and garment producers in Thailand and only fourteen of them are listed on SET. A quick look of the financial statements of public textile producers on SET indicates that there are three companies that endured losses in three consecutive years from 2018 to 2020; they are Crystal Peak Holding PLC (SET: CPH), Asia Fiber PLC (SET: AFC) and Thai Textile Industry Public Company Limited (SET: TTI). Among these three poor performers, TTI is the weakest with approximate losses THB 110 million, THB 256 million and THB 95 million throughout the period as shown in below Table 1.

Table 1: Net income of fourteen publicly listed companies in Thailand

No.	Public Companies	Net Income in million Baht		
		2018	2019	2020
1	SABINA PCL	361.59	413.25	276.81
2	TORAY TEXTILES (THAILAND) PCL	-	456.77	229.05
3	THAI RAYON PCL	2,127.55	1,576.67	188.84
4	PAN ASIA FOOTWEAR PCL	53.06	37.75	89.57
5	UNION PIONEER PCL	18.11	1.04	66.80
6	CPL GROUP PCL	11.98	(163.89)	18.87
7	THANULUX PCL	195.52	89.61	10.76
8	CASTLE PEAK HOLDINGS PCL	(6.73)	(223.42)	(17.99)
9	TPCS PCL	80.75	74.60	(19.51)
10	UNION TEXTILE INDUSTRIES PCL	103.65	95.86	(37.72)
11	ASIA FIBER PCL	(0.43)	(21.13)	(42.73)
12	PEOPLE'S GARMENT PCL	96.06	3.02	(44.07)
13	**THAI TEXTILE INDUSTRY PCL**	**(109.65)**	**(255.53)**	**(94.65)**
14	THAI WACOAL PCL	355.76	336.08	(314.88)

Source: Stock Exchange Thailand (SET, 2021)

However, in terms of revenue, TTI ranked at the third position in 2018 and fifth position in 2020 among those listed companies on SET.

Table 2: Revenue of fourteen publicly listed companies in Thailand

No.	Public Companies	Revenue in million Baht		
		2018	2019	2020
1	TORAY TEXTILES (THAILAND) PCL	-	9,587.07	8,741.22
2	THAI RAYON PCL	10,094.43	9,449.05	7,381.20
3	THAI WACOAL PCL	4,606.05	4,881.15	2,956.21
4	SABINA PCL	3,101.47	3,290.96	2,911.68
5	**THAI TEXTILE INDUSTRY PCL**	**3,874.23**	**2,996.27**	**1,903.59**
6	CPL GROUP PCL	2,897.55	2,430.10	1,593.55
7	CASTLE PEAK HOLDINGS PCL	1,590.15	1,552.30	1,331.85
8	THANULUX PCL	1,787.37	1,642.82	1,132.79
9	TPCS PCL	933.68	840.91	762.91
10	UNION PIONEER PCL	575.16	561.80	693.07
11	PAN ASIA FOOTWEAR PCL	820.05	783.48	635.52
12	ASIA FIBER PCL	989.44	860.93	573.21
13	PEOPLE'S GARMENT PCL	704.23	707.37	558.95
14	UNION TEXTILE INDUSTRIES PCL	787.30	18.54	18.08

Source: Stock Exchange Thailand (SET, 2021)

Hence, for TTI, as one of the earliest entrants into the market, it would be interesting to investigate and identify the weaknesses of the company such that it has a relatively substantial top line vis-à-vis a poorly performing bottom line.

2.4. China Textile Industry

China is the world's leading producer and exporter of both raw textiles and garments. Due to the coronavirus pandemic, China is exporting less textiles and apparel to the world and yet China keeps itself as the top producer and exporter among other countries. In 2019, according to (WTO, 2021), China accounted for approximately 34% of the world textile and garment exports. Since China is the world's leading producer of textiles and garment, the financial performance of Chinese textile manufacturers should be carefully analyzed and set as a benchmark for the textile manufacturers of Thailand in order to find out the potential areas to improve and catch up with the Chinese textile manufacturers. To understand which areas (from a financial perspective) TTI should improve, this study will compare the financial performance of TTI against a top performing firm from China.

2.5. Lu Thai Textile Company Limited

Lu Thai Textile Company Limited (LTTC), which is the third largest textile and garment manufacturer by revenue in China as reported by China Daily, was founded in 1990. LTTC is listed on Shenzhen Stock Exchange (SZSE) and has over forty manufacturing factories in eight countries and 70% of its products are exported to over sixty countries and regions with approximate annual net income over CNY 800 million in 2018 before COVID-19 outbreak. Although LTTC is significantly larger than TTI in terms of revenue, the revenue composition of LTTC is similar to TTI in terms of product offerings (such as fabric, cotton and apparel) and the revenue attributable to these product offerings in percentage terms.

3. Research Questions and Objectives

This study will focus on answering following questions:

- What are the key differences in financial performance of TTI and LTTC in the period between 2016 and 2020?
- What can TTI learn from LTTC in terms of financial Key Performance Indicators (KPI)?
- What areas should TTI improve from a financial perspective?

The research objectives of this study are to compare the financial performance of LTTC and TTI, and to determine the key areas TTI can learn from LTTC to improve TTI's financial performance based on the financial analysis of five years.

4. Research Scope and Methodology

This study covers five years financial performance (from 2016 to 2020) of TTI and LTCC, compares the financial metrics, and compares financial KPIs in the growth metrics, profitability metrics, return metrics, and so on of each company by using ratio analysis in order to pin down the key differences between the two companies. After that, the study discovers the underlying reasons for the financial metrics and come up with the possible areas in which TTI can improve in terms of these financial metrics. The study is based on secondary data sources such as company financial statements, government records, journals, newspapers, and websites. Financial data of the two companies for five years period was obtained from Stock Exchange Thailand (SET), Sina finance (SF) and yahoo finance (YF).

The study uses ratio analysis because it is a useful approach to understand the situation (strength and weaknesses) of a company by dividing different financial figures into one another. Moreover, ratios are valuable since they standardize balance sheet and income statement numbers and hence, differences in firm size do not affect the analysis (Melicher & Norton, 2017). This point is the best suit for the study since TTI and LTTC are different in size. The study analyzes the financial statements of TTI and LTTC using growth rate, profit margins, liquidity ratios, efficiency ratios, profitability ratios and solvency ratios. For growth rate, growth rates of revenue, earing before interest and tax (EBIT), earning before interest, tax, depreciation and amortization (EBITDA), and net income are used. For profit margins, gross profit margin, operating income margin and net income margin are used. For efficiency, inventory turnover, accounts receivable turnover, accounts payable turnover, cash conversion cycle, assets turnover and fixed assets turnover are used. Current ratio and quick ratio are used as liquidity ratios. For profitability, return on equity (ROE), return on assets (ROA) and return on capital employed (ROCE) ratios are used. Last but not least, debt-to-equity ratio and debt-to-assets ratio are used to compare solvency.

4.1. Key Financial Ratios

4.1.1. Growth Rate

Growth rate is the percentage change of a certain variable from one period to another. It can be calculated in different formulas depending on the nature of data and the result required. One simple formula that is widely used is as follow:

$$\boldsymbol{Growth\ Rate} = \frac{\boldsymbol{Value_t - Value_{t-1}}}{\boldsymbol{Value_{t-1}}}$$

where t represents period (or) time t

Moreover, Compound Annual Growth Rate (CAGR) is generally calculated as an interpretation rate of a company's growth over a period of time. The formula is as follow:

$$\boldsymbol{CAGR} = \left(\frac{\boldsymbol{Value_N}}{\boldsymbol{Value_0}}\right)^{\frac{\boldsymbol{1}}{\boldsymbol{N}}} - \boldsymbol{1}$$

where N represents number of years

4.1.2. Profitability Ratios (margins)

(i) The gross profit margin calculates the gross profit per unit revenue after deducting cost of goods sold (COGS) and before deducting any expenses such as selling, general, and administrative costs. The gross profit margin formula is as follow:

$$\boldsymbol{Gross\ Profit\ Margin} = \frac{\boldsymbol{Revenue - COGS}}{\boldsymbol{Revenue}}\ (\boldsymbol{or})\ \frac{\boldsymbol{Gross\ Profit}}{\boldsymbol{Revenue}}$$

(ii) The operating income margin calculates the performance of a company with respect to its operations before paying out interest and tax expenses. The operating income margin formula is as follow:

$$\boldsymbol{Operating\ Income\ Margin} = \frac{\boldsymbol{EBIT}}{\boldsymbol{Revenue}}\ (\boldsymbol{or})\ \frac{\boldsymbol{Operating\ Income}}{\boldsymbol{Revenue}}$$

(iii) The net income margin calculates the profit per unit revenue of a company. The net income margin formula is as follow:

$$\boldsymbol{Net\ Income\ Margin} = \frac{\boldsymbol{Net\ Income}}{\boldsymbol{Revenue}}$$

4.1.3. Efficiency Ratios

Here, we use average inventory, accounts receivable, and accounts payable figures because revenue is the Income Statement iteam which computes over the whole year while inventory, account receivable, and accounts payable are the Balance Sheet items which are compute at a point in time.

(i) Inventory turnover ratio shows the efficiency of a company at selling their inventory within a given period. The inventory turnover formula is:

$$\boldsymbol{Inventory\ Turnover} = \frac{\boldsymbol{Revenue}}{\boldsymbol{avg\ Inventory}}$$

$$\boldsymbol{avg\ Inventory} = \frac{\boldsymbol{Inventory_{beginning}} + \boldsymbol{Inventory_{end}}}{\mathbf{2}}$$

(ii) Accounts receivable turnover ratio shows the efficiency of a company at collecting short-term credits from its buyers. The average figure of accounts receivable is used for this ratio as well.

$$\boldsymbol{Account\ Receivables\ Turnover} = \frac{\boldsymbol{Revenue}}{\boldsymbol{avg\ Account\ Receivables}}$$

$$\boldsymbol{avg\ Account\ Receivables} = \frac{\boldsymbol{Account\ Receivables_{beginning}} + \boldsymbol{Account\ Receivables_{end}}}{\mathbf{2}}$$

(iii) Accounts payable turnover ratio shows the efficiency of a company at paying short-term credits to its suppliers. We also use the average figure for accounts payable here.

$$\boldsymbol{Account\ Payables\ Turnover} = \frac{\boldsymbol{Revenue}}{\boldsymbol{avg\ Account\ Payables}}$$

$$\boldsymbol{avg\ Account\ Payables} = \frac{\boldsymbol{Account\ Payables_{beginning}} + \boldsymbol{Account\ Payables_{end}}}{\mathbf{2}}$$

(iv) Cash conversion cycle (CCC) shows how many days a company takes to convert the inventory into cash flows from revenue. The ratio considers: 1) the time needed for selling inventory, 2) the time needed to collect accounts receivable and 3) the time needed to pay accout payables.

$$\boldsymbol{CCC = Days\ of\ Inventory\ Outstanding + Days\ Sales\ Outstanding + Days\ Payables\ Outstanding}$$

(v) Total assests turnover ratio indicates the efficiency of a company in utilizing its total assets to generate revenue. The average figure of total assets is used for this ratio. The formula is as follow:

$$\boldsymbol{Total\ Assets\ Turnover = \frac{Revenue}{avg\ Total\ Assets}}$$

$$\boldsymbol{avg\ Total\ Assets = \frac{Total\ Assets_{beginning} + Total\ Assets_{end}}{2}}$$

(vi) Fixed assests turnover ratio indicates the efficiency of a company in utilizing its fixed (or) long-term assets to generate revenue. Here, we use the average figure of fixed assets. The formula is as follow:

$$\boldsymbol{Fixed\ Assets\ Turnover = \frac{Revenue}{avg\ Fixed\ Assets}}$$

$$\boldsymbol{avg\ Fixed\ Assets = \frac{Fixed\ Assets_{beginning} + Fixed\ Assets_{end}}{2}}$$

4.1.4. Profitability Ratios

(i) Return on Equity (ROE) shows a company's profitability in relation to shareholder's equity invested in the firm. The ratio suggests how many portion of total asstes is financed with loan capital.

$$\boldsymbol{ROE = \frac{Net\ Income}{Equity}}$$

(ii) Return to Assets (ROA) shows a company's profitability in relation to its total assets. The ratio suggests how efficiently assets are used in generating income of a company. We use average figure of total assets here as well.

$$\boldsymbol{ROA = \frac{Net\ Income}{avg\ Total\ Assets}}$$

$$\boldsymbol{avg\ Total\ Assets = \frac{Total\ Assets_{beginning} + Total\ Assets_{end}}{2}}$$

(iii) Return on capital employed (ROCE) shows a company profitability in relations to capital at hand. ROCE is similar to return on invested capital (ROIC), yet there are slight differences in formula and usage. We use ROCE in this paper because it calcuates based on before-tax figures and hence, is the most suitable for comparing two comapies under different tax systems. Average figures of balance sheet items are used in the following ratio:

$$\boldsymbol{ROCE = \frac{EBIT}{avg\ Total\ Assets - avg\ Current\ Liabilities}}$$

$$\boldsymbol{avg\ Total\ Assets = \frac{Total\ Assets_{beginning} + Total\ Assets_{end}}{2}}$$

$$\boldsymbol{avg\ Current\ Liabilities = \frac{Current\ Liabilities_{beginning} + Current\ Liabilities_{end}}{2}}$$

4.1.5. Liquidity Ratios

(i) Current ratio measures the capability of a company to pay back short-term liabilities as those liabilities come due. Current ratio formula is as follow:

$$\boldsymbol{Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}}$$

(ii) Quick ratio also measures the ability of a company to pay back short-term liabilities. However, in this ratio, it does not include inventory in calculation since inventory is the most illiquid among current assets of a company.

$$\boldsymbol{Quick\ Ratio = \frac{Current\ Assets - Inventory}{Current\ Liabilities}}$$

4.1.6. Solvency Ratios

(i) Debt-to-equity ratio shows financial leverage (indebtedness) of a company by indicating to which extent the operation is financed with debt compared to its own equity.

$$\boldsymbol{Debt - to - Equity = \frac{Total\ Debt}{Total\ Equity}}$$

(ii) Debt-to-assets ratio shows financial leverage (indebtedness) of a company by indicating to which extent its assets is financed by debt.

$$\boldsymbol{Debt - to - Assets = \frac{Total\ Debt}{Total\ Assets}}$$

4.2. Descriptive Statistics

4.2.1. Financial Statements of TTI

Table 3: Key financial figures from TTI's financial statements

TTI	THB in million				
	FY2016	FY2017	FY2018	FY2019	FY2020
Income Statement					
Total Revenue	3,776.14	3,505.15	3,874.23	2,996.27	1,903.59
Cost Of Goods Sold	3,519.90	3,318.77	3,769.93	2,873.57	1,889.78
Gross Profit	256.24	186.37	104.30	122.70	13.81
EBITDA	269.33	220.53	166.94	204.84	132.92
Operating Expense	220.17	197.88	190.93	175.33	102.19
Operating Income	36.07	(11.50)	(86.60)	(52.60)	(88.40)
Net Income	(24.10)	524.82	(109.60)	(255.50)	(94.60)
Balance Sheet					
Assets					
Total Cash & ST Investments	136.25	146.14	156.09	220.59	222.42
Accounts Receivable	397.84	362.48	327.60	261.28	157.07
Inventory	1,129.31	1,116.65	1,115.89	936.67	785.26
Total Current Assets	1,679.23	1,653.69	1,643.19	1,964.54	1,612.18
Fixed Assets	2,236.32	3,119.12	4,011.82	2,923.34	2,546.24
Total Assets	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42
Liabilities					
Accounts Payable	204.55	132.25	162.57	129.78	60.55
Total Current Liabilities	2,167.74	2,277.96	2,346.53	1,985.90	1,404.35
Total Debt	1,816.36	2,198.35	2,230.88	1,612.50	1,098.22
Total Liabilities	2,299.52	2,646.46	2,815.12	2,317.09	1,682.24
Total Equity	1,513.25	2,013.07	2,700.37	2,428.56	2,333.91
Cash-flow Statement					
Cash-flow from Operations	572.96	195.88	173.94	459.48	299.16
Cash-flow from Investing	(123.80)	(453.20)	(71.70)	310.99	269.87
Cash-flow from Financing	(409.50)	267.20	(92.20)	(706.00)	(567.20)

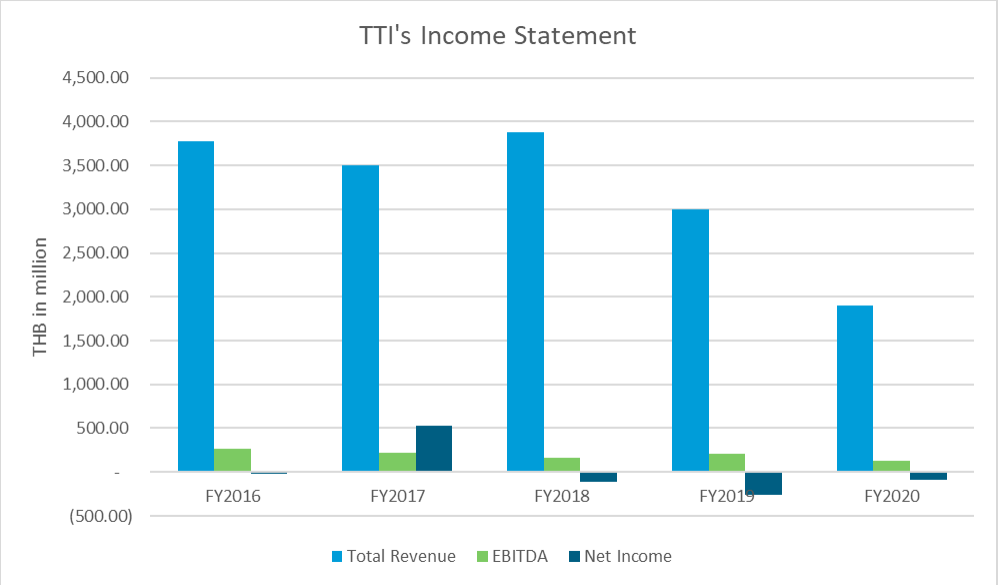
Source: Annual reports of TTI (SET, 2021)

Income Statement of TTI

TTI's revenue in FY2016 was THB 3,776,14 million. It decreased in FY2017 to THB 3,505.15 million and it bounced back to THB 3,874.23 million in FY2018. However, the revenue has been severely impacted in FY2019 and FY2020. Although the decline in revenue for FY2019 may be due to the company's weak performance in the market, the sharp decline in revenue in FY2020 can be partially attributable to COVID-19 pandemic. Figure 1 shows downward trend of revenue for the five years period.

After deducting COGS and operating expenses (excluding adding up depreciation and amortization), TTI's EBITDA in FY2016 was THB 269.33 million. It decreased in FY2017 and in FY2018 to THB 220.53 million and THB 166.94 million, respectively. Although, in 2019, it improved a bit to THB 204.84 million, EBITDA in FY2020 dropped even further compared to FY2018. The figure 1 shows decreasing trend of TTI's EBITDA.

Figure 1: Key items from income statements of TTI (FY2016 to FY2020)



Source: Annual reports of TTI (SET, 2021)

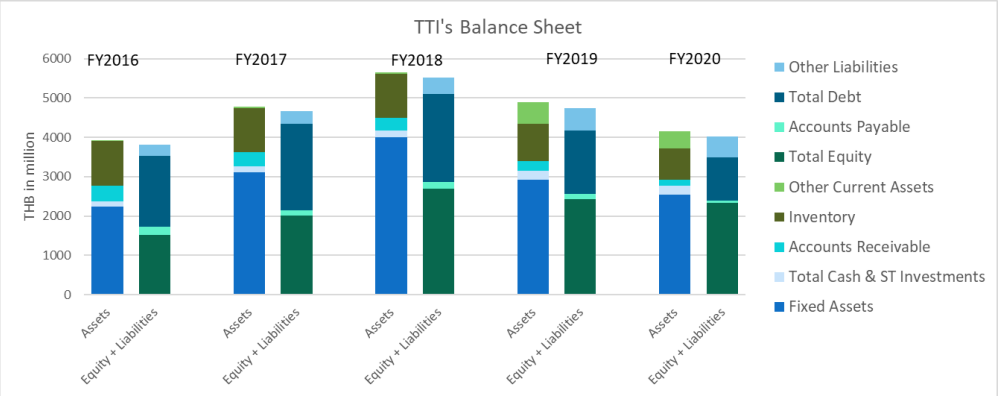
In terms of net income, TTI received negative net income throughout the studied period except FY2017. The reason for positive net income in 2017 was gain from assets selling and assets write-down which in total worth THB 575.58 million. In FY2019, TTI's net income plummeted to THB 255.50 million which

is mainly due to a major asset write-down of THB 182.80 million and a loss on asset sale of THB 22.40 million. The figure 1 shows trend of net income of TTI for the five years period.

Balance Sheet (Statement of Financial Position) of TTI

For assets side, TTI's cash and equivalents balance has been stable and improving over the entire studied period from THB 136.25 million in FY2016 to THB 222.42 million in FY2020. The company has also been able to reduce the accounts receivable over the studied period, which may be driven by lower credit sales or revenue over the years. The inventory has also been reduced from THB 1,129.31 million in FY2016 to THB 785.26 million in FY2020. This may not be a good thing since the decrease in inventory means proper replenishment was not practiced. In terms of fixed assets, it was increasing gradually from THB 2,236.32 million to THB 4,011.82 million throughout FY2016 to FY2018 but dropped significantly in FY2019 and FY2020. Decreasing in fixed assets means that the company is not properly maintaining or replacing its property, plant, and equipment (PPE). Moreover, selling off the fixed assets (see positive cash-flow from investing in FY2019 and FY2020) indicates poor performance of TTI's assets management.

Figure 2: Key items from balance sheet of TTI (FY2016 to FY2020)



Source: Annual reports of TTI (SET, 2021)

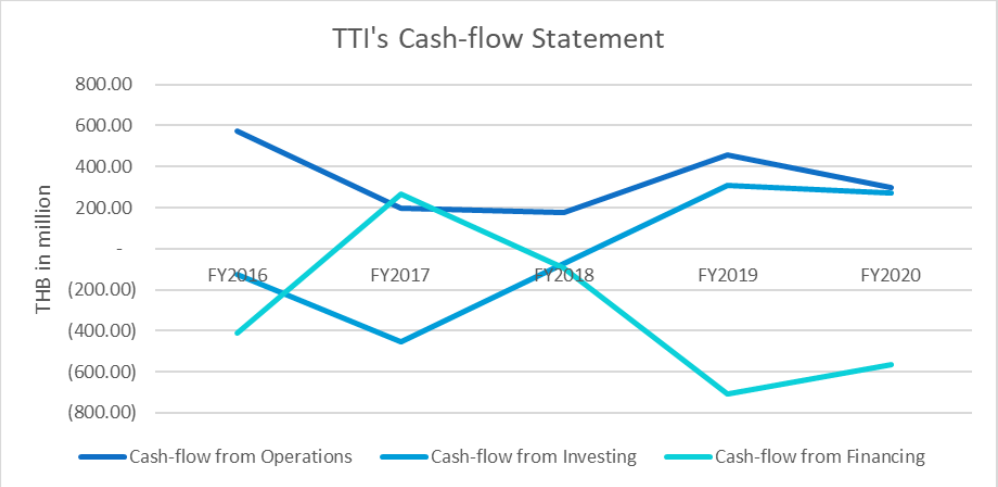
For liabilities side, accounts payable, total debt and total liabilities fluctuated throughout FY2016 to FY2019. In FY2020, all three items dropped to lower position compared to the previous four years. In the matter of accounts payable, less payables means company may not be able to delay the payments to its suppliers which could be a good sign since the company would not suffer in terms of reputation as well as financial for late payments. Regarding debt and liabilities, both items were getting lower in FY2019 and FY2020 and this may be a good thing for TTI since less debt and liabilities means less risk. We will discuss further about this under solvency ratios analysis in section 4.3.6.

The figure 2 shows trend of key items from TTI's balance sheet and all items except cash and equivalents had the falling trend during the studied period.

Cash Flow Statement of TTI

TTI's cash-flow from operations fluctuated during the studied period. Operating cash-flow in FY2016 was THB 572.96 million. It decreased in FY2017 and FY2018 to THB 195.88 million and THB 173.94 million, respectively. It bounced back to THB 459.48 million in FY2019 and then dropped once again to THB 299.16 million in FY2020.

Figure 3: Key items from cash-flow statement of TTI (FY2016 to FY2020)



Source: Annual reports of TTI (SET, 2021)

The cash-flow from investing of TTI has a positive slope line throughout the studied period except FY2017. In FY2016, it was THB -123.80 million then it fell to THB -453.20 million in FY2017. It went up to THB -71.70 million in FY2018. As mentioned in the balance sheet of TTI section, TTI sold off its fixed assets in FY2019 and FY2020 which led to positive cash-flows of THB 310.99 million and THB 269.87 million.

TTI has negative cash-flow from financing during FY2016 with THB -409.50 million and FY2020 with THB – 567.20 million, except one positive cash-flow of THB 267.20 million in FY2017. The figure 3 shows trend of TTI's cash-flows for the studied period.

4.2.2. Financial Statements of LTTC

Table 4: Key financial figures from TTI's financial statements

LTTC	CNY in million				
	FY2016	FY2017	FY2018	FY2019	FY2020
Income Statement					
Total Revenue	5,990.49	6,409.22	6,879.06	6,801.38	4,751.22
Cost Of Goods Sold	4,053.62	4,502.27	4,903.44	4,868.81	3,857.67
Gross Profit	1,936.87	1,906.96	1,975.62	1,932.57	893.55
EBITDA	1,407.85	1,413.33	1,467.18	1,403.73	573.55
Operating Expense	904.57	894.40	947.66	1,010.75	790.52
Operating Income	1,032.30	1,012.55	1,027.96	921.82	103.03
Net Income	808.76	841.15	811.53	952.39	97.31
Balance Sheet					
Assets					
Total Cash & ST Investments	659.12	726.64	535.13	932.49	2,017.86
Accounts Receivable	377.29	473.36	549.27	647.01	760.57
Inventory	1,817.54	2,100.66	2,093.37	2,421.50	1,988.97
Total Current Assets	3,229.68	3,589.83	3,487.10	4,230.55	5,022.98
Fixed Assets	6,234.92	6,580.79	7,050.66	7,654.88	7,106.93
Total Assets	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90
Liabilities					
Accounts Payable	257.64	373.57	353.69	390.57	243.26
Total Current Liabilities	1,703.63	2,170.22	2,374.90	3,186.23	1,870.90
Total Debt	1,008.94	1,197.88	1,497.13	2,265.47	2,819.71
Total Liabilities	2,018.60	2,395.55	2,811.94	3,586.13	4,038.23
Total Equity	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68
Cash-flow Statement					
Cash-flow from Operations	1,314.73	1,070.51	1,430.34	1,086.11	593.54
Cash-flow from Investing	(880.40)	(743.90)	(886.60)	(788.10)	(788.20)
Cash-flow from Financing	(552.60)	(270.00)	(686.90)	49.24	733.66

Source: Annual reports of LTTC (YF, 2021) and (SF, 2021)

Income Statement of LTTC

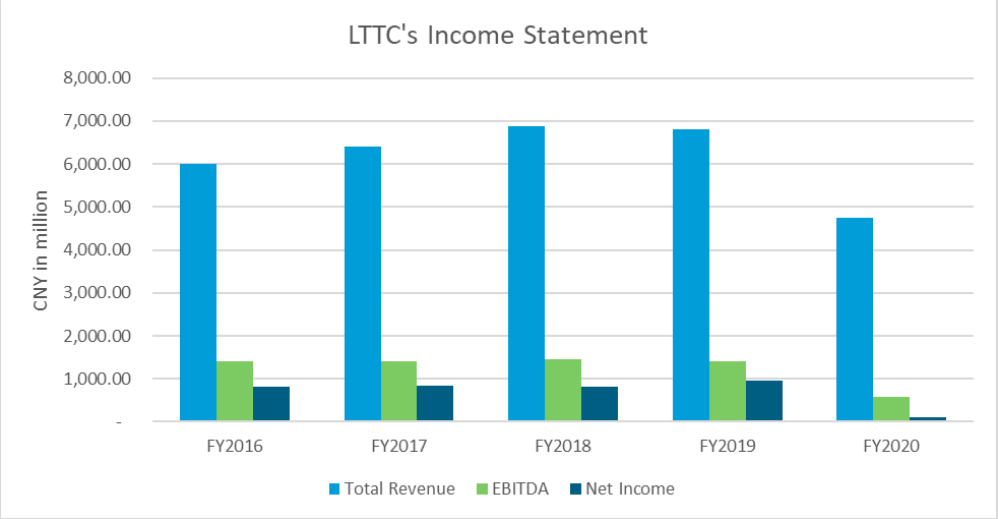
LTTC's revenue was steadily increased from CNY 5,990.49 million in FY2016 to CNY 6,879.06 in FY2018, then there was a slight fell to CNY 6,801.38 in FY2019. However, in FY2020, the revenue was impacted severely by COVID-19 pandemic and fell to CNY 4,751.22 million.

Similar pattern has found for LLTC's EBITDA as well from FY2016 to FY2020. EBITDA was growing gradually from CNY 1,407.85 million in FY2016 to CNY 1,467.18 million in FY2018, then it fell slightly to CNY 1,403.73 in FY2019. It fell to CNY 573.55 million in FY2020 due to the hug decline in revenue and only little decrease in COGS.

For net income, LTTC had a growing trend from CNY 808.76 million in FY2016 to CNY 952.39 million in FY2019. However, in FY2020, LTTC's net income fell to CNY 97.3 million and again, this huge fall in net income can be assumed the impact of COVID-19 pandemic.

The figure 4 shows positive trend of revenue and fluctuation of EBITDA and net income of LTTC for the period of FY2016 to FY2019 then a sharp fall in all three items in FY2020.

Figure 4: Key items from income statements of LTTC (FY2016 to FY2020)

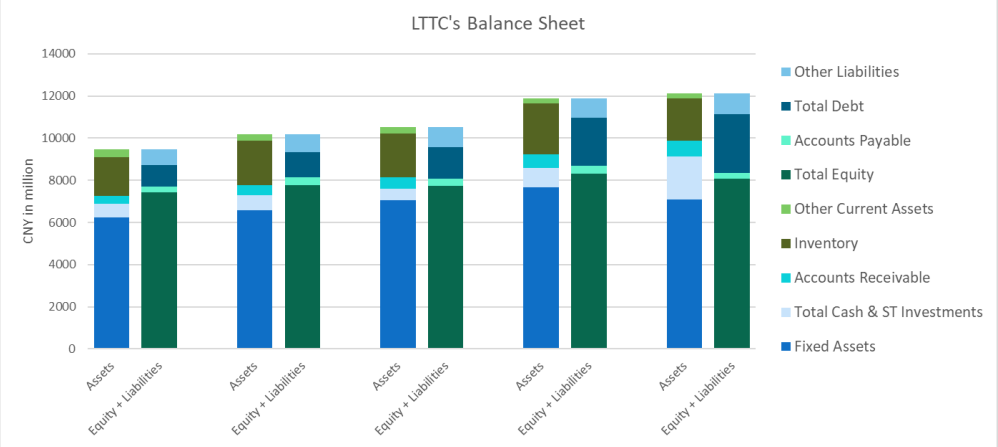


Source: Annual reports of LTTC (YF, 2021) and (SF, 2021)

Balance Sheet (Statement of Financial Position) of LTTC

For assets side, LTTC's cash and equivalents balance has been stable and improving over the entire studied period from CNY 659.12 million in FY2016 to CNY 2,017.86 million in FY2020. The accounts receivable of LTTC was increasing throughout the five years period from CNY 377.29 in FY2016 to CNY 760.57 in FY2020. This indicates that the company has been providing a growing amount of credit sales to the customers over the years. The inventory was stable over the studied period with slight increase in FY2019. LTTC seems to be able to maintain its inventory as well as replenishment properly even during COVID-19 pandemic period. Regarding fixed assets, it was increasing gradually from CNY 6,234.92 million to CNY 7,106.93 million throughout FY2016 to FY2020 Increasing in fixed assets means that LTTC is appropriately managing in replacing its property, plant, and equipment (PPE) and investing further in PPE for future growth of the company.

Figure 5: Key items from balance sheet of LTTC (FY2016 to FY2020)



Source: Annual reports of LTTC (YF, 2021) and (SF, 2021)

For liabilities side, accounts payable of LTTC grow steadily from CNY 257.64 million in FY2016 to CNY 390.57 million in FY2019, but then in FY2020, it fell back to CNY 243.26 million. LTTC's debt was increasing from CNY 1,008.94 million in FY2016 to CNY 2,819.71 million in FY2020. Similar trend with debt, LTTC's liabilities was also rising from CNY 2,018.60 million in FY2016 to CNY 4,038.23 million in FY2020. Increasing in debt as well as in liabilities does not always means bad. As long as the company is able to invest

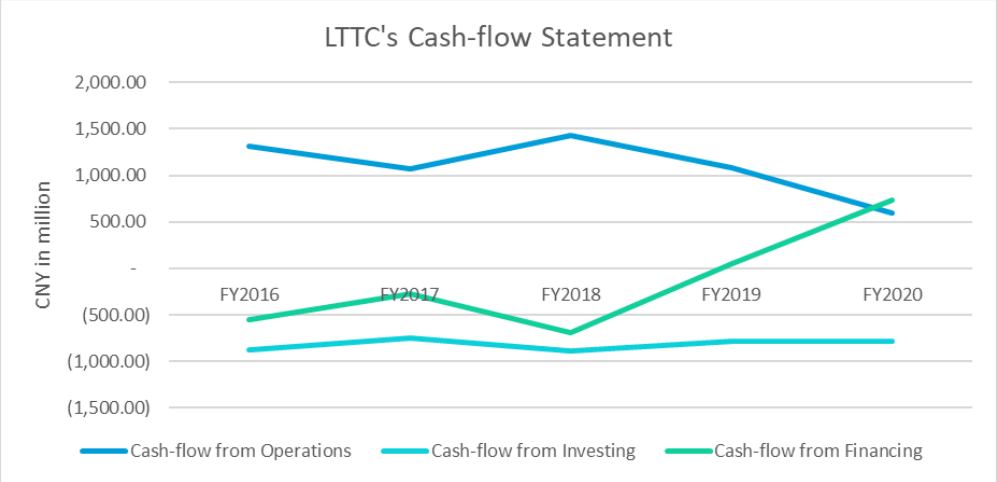
in projects which generate returns higher than the Weighted Average Cost of Capital (WACC), it is a positive thing for the company to raise additional debt for investments. The figure 5 shows trend of key items from LTTC's balance sheet.

Cash-flow Statement of LTTC

LTTC's cash-flow from operations was rather stable with positive cash-flows of CNY 1,314.73 million in FY2016 and CNY 1,086.11 million in FY2019. However, in FY2020, it dropped to CNY 593.54 million.

The cash-flow from investing of LTTC was also steady with negative cash-flows during the whole five years period, which reflects the company's increasing fixed assets and proper planning for future growth.

Figure 6: Key items from cash-flow statement of LTTC (FY2016 to FY2020)



Source: Annual reports of LTTC (YF, 2021) and (SF, 2021)

LTTC has negative cash-flow from financing during FY2016 with CNY 552.60 million and FY2020 with CNY686.90 million. The financing cash-flow is negative, despite the increase in long term debt, due to dividends and special dividends paid out to the shareholders in these years. In FY2019 and FY2020, cash-flow from financing went up to CNY 49.24 million and to CNY 733.66 million, respectively. The figure 6 shows trend of LTTC's cash-flows for the studied period.

4.3. Comparative Analysis

4.3.1. Growth Rate

The first step in comparing the financial performance of the two companies is to compare the growth rates of these two companies over the past five years. As such, TTI's growth rates of revenue, EBITDA, EBIT and net income would be benchmarked against LTTC in this section.

The revenue compound annual growth rate (CAGR) of TTI from FY2016 to FY2020 is -15.7% compared to LTTC's -5.6%. The main reason for the negative CAGR for both companies was due to COVID-19 pandemic which negatively affected the textile industry in both Thailand and China. However, we can see from the comparison in the table 5 that LTTC's performance in term of revenue has been more resilient compared to TTI evidenced by the lower CAGR. In fact, LTTC's revenue has been growing until FY2019 whereas TTI's revenue experienced a negative growth in FY2017.

In terms of the EBITDA growth from FY2016 to FY2020, TTI has a CAGR of -16.2% compared to LTTC's -20.1%. Therefore, TTI appears to be more efficient in controlling the operating costs, which can be regarded as a positive thing for TTI.

However, TTI's EBIT and net income performance was extremely poor compared to LTTC. In particular, TTI's EBIT has been negative starting from FY2017 while the net income has been negative starting from FY2016, except for FY2017. However, TTI's exceptional profit in FY2017 (THB 524.8 million) can be attributed to the one-off items of gain on sale of assets (THB 86.2 million) and assets write-down (THB 671.4 million) and thus, TTI's FY2017 net income is not representative of its actual operational performance.

On the other hand, LTTC's EBITDA and net income has been consistently positive throughout the period of our analysis and the negative CAGRs of each metric can be attributable to the impact of COVID-19 pandemic which affects global economies negatively in FY2019 and FY2020. Nevertheless, we can see that LTTC was able to remain profitable in EBIT and net income levels even during the global pandemic period.

Table 5: Growth rate comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	CAGR
Revenue	THB millions	3,776.14	3,505.15	3,874.23	2,996.27	1,903.59	-15.7%
% growth	%		*-7.2%*	*10.5%*	*-22.7%*	*-36.5%*	
EBITDA	THB millions	269.33	220.53	166.94	204.84	132.92	-16.2%
% growth	%		*-18.1%*	*-24.3%*	*22.7%*	*-35.1%*	
EBIT	THB millions	36.07	(11.50)	(86.60)	(52.60)	(88.40)	N.M.*
% growth	%		*-131.9%*	*653.0%*	*-39.3%*	*68.1%*	
Net Income	THB millions	(24.10)	524.82	(109.60)	(255.50)	(94.60)	N.M.*
% growth	%		*2277.7%*	*-120.9%*	*N.M.**	*63.0%*	
LTTC	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	CAGR
Revenue	CNY millions	5,990.49	6,409.22	6,879.06	6,801.38	4,751.22	-5.6%
% growth	%		*7.0%*	*7.3%*	*-1.1%*	*-30.1%*	
EBITDA	CNY millions	1,407.85	1,413.33	1,467.18	1,403.73	573.55	-20.1%
% growth	%		*0.4%*	*3.8%*	*-4.3%*	*-59.1%*	
EBIT	CNY millions	1,032.30	1,012.55	1,027.96	921.82	103.03	-43.8%
% growth	%		*-1.9%*	*1.5%*	*-10.3%*	*-88.8%*	
Net Income	CNY millions	808.76	841.15	811.53	952.39	97.31	-41.1%
% growth	%		*4.0%*	*-3.5%*	*17.4%*	*-89.8%*	

Note: N.M.* = Not meaningful

Source: Calculated from annual reports

From this section, the main takeaway is that TTI may need to improve its revenue growth rate since its revenue growth performance is lower than the benchmarked LTTC's revenue growth. TTI may need to consider a number of potential solutions such as expanding its geographical presence, product lines or increasing the quality and price of its products in order to achieve higher growth in its revenue. For TTI's performance on EBITDA, EBIT and Net Income, we will cover the profitability performance comparison of the two companies in the next section under profitability ratios.

4.3.2. Profitability Ratios (Margins)

In this section, we will use the following three key profitability ratios (margins) compare the profitability performance between the two companies: 1) gross profit margin, 2) operating income margin and 3) net income margin.

Similar to the growth rate comparison, it was found that TTI's performance in the gross profit margin was found to be weaker than that of LTTC. The gross profit margin of TTI has been decreasing from 6.8% in FY2016 to just 0.7% in FY2020. While LTTC has also witnessed a similar downward trend in the gross profit margin from FY2016 to FY2020, it is worth noting that the gross profit margin of LTTC is at a much higher level than TTI which may be attributable

to better performance in procurement of raw materials as well as economies of scale. Therefore, TTI may need to optimize its COGS in order to achieve better margins. In particular, the procurement process and supplier agreements of TTI should be reviewed and optimized so that the gross profit margins can be improved.

Table 6: Profitability ratios (margins) comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Revenue	THB millions	3,776.14	3,505.15	3,874.23	2,996.27	1,903.59
Cost of Goods Sold	THB millions	3,519.90	3,318.77	3,769.93	2,873.57	1,889.78
Gross Profit	THB millions	256.24	186.37	104.30	122.70	13.81
% margin	*%*	*6.8%*	*5.3%*	*2.7%*	*4.1%*	*0.7%*
Operating Expenses	THB millions	220.17	197.88	190.93	175.33	102.19
as % of revenue	*%*	*5.8%*	*5.6%*	*4.9%*	*5.9%*	*5.4%*
Operating Income	THB millions	(11.50)	(86.60)	(52.60)	(88.40)	(86.60)
% margin	*%*	*-0.3%*	*-2.5%*	*-1.4%*	*-3.0%*	*-4.5%*
Net Income	THB millions	(24.10)	524.82	(109.60)	(255.50)	(94.60)
% margin	*%*	*-0.6%*	*15.0%*	*-2.8%*	*-8.5%*	*-5.0%*
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**
Revenue	CNY millions	5,990.49	6,409.22	6,879.06	6,801.38	4,751.22
Cost of Goods Sold	CNY millions	4,053.62	4,502.27	4,903.44	4,868.81	3,857.67
Gross Profit	CNY millions	1,936.87	1,906.96	1,975.62	1,932.57	893.55
% margin	*%*	*32.3%*	*29.8%*	*28.7%*	*28.4%*	*18.8%*
Operating Expenses	CNY millions	904.57	894.40	947.66	1,010.75	790.52
as % of revenue	*%*	*15.1%*	*14.0%*	*13.8%*	*14.9%*	*16.6%*
Operating Income	CNY millions	1,032.30	1,012.55	1,027.96	921.82	103.03
% margin	*%*	*17.2%*	*15.8%*	*14.9%*	*13.6%*	*2.2%*
Net Income	CNY millions	808.76	841.15	811.53	952.39	97.31
% margin	*%*	*13.5%*	*13.1%*	*11.8%*	*14.0%*	*2.0%*

Source: Calculated from annual reports

Next, we will look at the operating income margin of TTI and LTTC. Since the gross profit margin of LTTC is much higher than TTI, it is expected that LTTC will have a higher operating income margin. As such, in order to compare the cost management in operational expenses, it may be better to compare the operating expenses as a percentage of revenue for both TTI and LTTC. From our calculations, it was found that TTI only utilizes between 4.9% and 5.8% of its revenue for the operating expenses where as LTTC deploys 13.8% to 16.6% of its revenue. Although it is a positive fact that TTI operates in a much leaner behavior for its operations, it is worth reminding that the much lower gross profit margin may be due to TTI not deploying enough resources (operating expenses) to optimize its COGS. Therefore, TTI management should perform a cost-benefit analysis of the cost of deploying more resources for procurement vis-à-vis the savings from optimized procurement processes.

Since TTI's operating income is negative throughout from FY2016 to FY2020, TTI was not expected to incur income taxes over these years. Therefore, the comparison of net income margin between TTI and LTTC may not be a meaningful comparison. However, the comparison of interest-bearing items between the two companies will be covered in Table 10 Leverage Ratios section of this paper.

4.3.3. Efficiency Ratios

The efficiency ratios measure how well a company manages its capital (financial resources) in order to generate the revenue. In this section, we will look at the following efficiency metrics between the two companies in order to pinpoint the key areas of improvement for TTI: 1) inventory turnover, 2) accounts receivable turnover, 3) accounts payable turnover, 4) cash conversion cycle, 5) assets turnover and 6) fixed assets turnover.

Table 7: Efficiency ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Cost of Goods Sold	THB millions	3,519.90	3,318.77	3,769.93	2,873.57	1,889.78
Inventory	THB millions	1,129.31	1,116.65	1,115.89	936.67	785.26
Inventory Turnover	x	3.0x	3.0x	3.4x	2.8x	2.2x
Accounts Receivable	THB millions	397.84	362.48	327.60	261.28	157.07
Accounts Receivable Turnover	x	7.8x	9.2x	11.2x	10.2x	9.1x
Accounts Payable	THB millions	204.55	132.25	162.57	129.78	60.55
Accounts Payable Turnover	x	18.1x	19.6x	25.6x	18.4x	18.2x
Cash Conversion Cycle	# days	149.88	144.53	126.31	146.42	186.93
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42
Asset Turnover	x	0.9x	0.8x	0.7x	0.6x	0.4x
Fixed Assets	THB millions	2,236.32	3,119.12	4,011.82	2,923.34	2,546.24
Fixed Asset Turnover	x	1.8x	1.6x	1.4x	1.0x	0.7x
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**
Cost of Goods Sold	CNY millions	4,053.62	4,502.27	4,903.44	4,868.81	3,857.67
Inventory	CNY millions	1,817.54	2,100.66	2,093.37	2,421.50	1,988.97
Inventory Turnover	x	2.3x	2.3x	2.3x	2.2x	1.7x
Accounts Receivable	CNY millions	377.29	473.36	549.27	647.01	760.57
Accounts Receivable Turnover	x	14.8x	14.4x	12.8x	10.8x	6.6x
Accounts Payable	CNY millions	257.64	373.57	353.69	390.57	243.26
Accounts Payable Turnover	x	16.2x	15.2x	13.5x	14.0x	10.8x
Cash Conversion Cycle	# days	162.96	160.13	157.60	176.98	231.15
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90
Asset Turnover	x	0.6x	0.7x	0.7x	0.6x	0.4x
Fixed Assets	CNY millions	6,234.92	6,580.79	7,050.66	7,654.88	7,106.93
Fixed Asset Turnover	x	1.1x	1.1x	1.2x	1.1x	0.8x

Source: Calculated from annual reports

The inventory turnover of TTI is higher than that of LTTC, which indicates that TTI is selling its products faster than LTTC and it has better inventory management compared to LTTC. It was also found that both TTI and LTTC

experienced lower inventory turnover in FY2019 and FY2020. The lower inventory in FY2020 could be due to the slower inventory movement (or lower sales) due to the COVID-19 pandemic.

The accounts receivable turnover of TTI had been gradually improving from FY2016 to FY2018 – however, it became lower in FY2019 and FY2020. Compared to LLTC, TTI appears to have a more stable accounts receivable turnover over the studied period and therefore, it indicates that TTI has been able to consistently collect the credits from the borrowers.

The accounts payable turnover of TTI appears to be higher than LTTC throughout the studied period, which indicates that LTTC has been able to delay or postpone the credit repayments to its creditors and suppliers. Although TTI might be able to extend its credit days and thus, lower the accounts payable turnover, it may not be in the best interest of TTI since it may deteriorate TTI's credibility for its credits and worsen the relationship with the suppliers. Therefore, TTI should carefully consider the trade-offs before optimizing its accounts payable turnover.

From the three turnover metrics discussed above, TTI is more efficient than LTTC in two metrics (inventory turnover and accounts receivable turnover) and therefore, TTI appears to have a shorter cash conversion cycle compared to LTTC. Therefore, TTI may be better positioned to invest in its inventory to fuel growth in the future compared to LTTC.

In addition, from our comparison of the asset turnover and fixed asset turnover between the two companies, TTI appears to be more efficient in terms of the utilization of its assets and TTI is able to generate more revenue per unit of asset and fixed asset utilization compared to LTTC.

From our efficiency ratios analysis, we found that TTI's operations come off as more efficient compared to that of LTTC.

4.3.4. Profitability Ratios (Returns)

The profitability ratios (returns) measure how efficient a company is in using its capital resources (equity and debt) to generate the profits for the company.

In this section, the following three profitability ratios (returns) between TTI and LTTC are analyzed in order to compare the financial performance of the two companies: 1) return on equity, 2) return on assets, and 3) return on capital employed.

Table 8: Profitability ratios (returns) comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42
Capital Employed	THB millions	1,747.81	2,494.85	3,308.48	2,901.98	2,754.08
Return on Equity	%	-1.2%	28.8%	-4.3%	-9.3%	-3.7%
Return on Assets	%	-0.5%	12.4%	-2.0%	-4.8%	-2.1%
Return on Capital Employed	%	2.0%	-0.5%	-3.0%	-1.7%	-3.1%
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90
Capital Employed	CNY millions	7,760.97	8,000.40	8,162.86	8,699.21	10,259.00
Return on Equity	%	11.6%	11.6%	11.1%	12.3%	1.1%
Return on Assets	%	9.2%	9.0%	8.3%	8.8%	0.7%
Return on Capital Employed	%	13.6%	12.8%	12.7%	10.9%	1.1%

Source: Calculated from annual reports

We can see from Table 8 that TTI's return on equity is negative over the studied period except for FY2017, in which the company earned one-time gains from disposal of assets. However, LTTC's return on equity is much higher than TTI and has been stable from FY2016 to FY2019 at around 11% - 12% levels and only dipped in FY2020, which might be attributable to the COVID-19 pandemic. As such, it is important to note that TTI needs to improve its bottom-line in order to provide attractive returns to the equity shareholders.

Similar to return on equity, the return on assets ratio of TTI is negative throughout the studied period except for FY2017 whereas that of LTTC has been consistently positive from FY2016 to FY2019. Therefore, we can draw a similar conclusion that TTI is weak in its bottom-line performance and TTI's management needs to address its poorly performing net income.

In addition to return on equity and return on assets, return on capital employed is another metric we used to compare the profitability performance between TTI and LTTC. TTI's return on capital employed had turned negative since FY2017 onwards which is in contrast to LTTC's more than 10% return on capital employed from FY2016 to FY2019. Since the numerator of return on capital employed is EBIT and TTI's operating expense as a percentage of revenue is more efficient than that of LTTC, it can be suggested that TTI's weak

performance in the gross profit margin is the main contributor for the difference in performance between the two companies.

4.3.5. Liquidity Ratios

In this section, we will compare the liquidity position of TTI and LTTC and see if TTI could improve an underlying financial metrics from our comparison. We will use the following two main liquidity ratios to compare the performance of the two companies: 1) current ratio and 2) quick ratio.

Table 9: Liquidity ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18
Current Liabilities	THB millions	2,167.74	2,277.96	2,346.53	1,985.90	1,404.35
Total Liabilities	THB millions	2,299.52	2,646.46	2,815.12	2,317.09	1,682.24
Current Assets	THB millions	1,679.23	1,653.69	1,643.19	1,964.54	1,612.18
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42
Current Ratio	x	0.77x	0.73x	0.70x	0.99x	1.15x
Quick Ratio	x	0.25x	0.23x	0.22x	0.26x	0.30x
LTTC	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68
Current Liabilities	CNY millions	1,703.63	2,170.22	2,374.90	3,186.23	1,870.90
Total Liabilities	CNY millions	2,018.60	2,395.55	2,811.94	3,586.13	4,038.23
Current Assets	CNY millions	3,229.68	3,589.83	3,487.10	4,230.55	5,022.98
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90
Current Ratio	x	1.90x	1.65x	1.47x	1.33x	2.68x
Quick Ratio	x	0.67x	0.58x	0.48x	0.51x	1.57x

Source: Calculated from annual reports

The current ratio of TTI is less than LTTC, which indicates that TTI's liquidity position is weaker than LTTC. However, in FY2019 and FY2020, it was found that TTI's current ratio has improved to 0.99x and 1.15x respectively, which indicates that TTI has mainly reduced its current liabilities with respect to its current assets in FY2019 and FY2020. However, it is worth noting that LTTC also had a similar sharp increase in current ratio in FY2020 and further analysis is required in order to determine whether it is due to coincidence or a correlating underlying factor.

Similar to the current ratio, TTI's quick ratio is lower compared to that of LTTC, and it has seen improvements in FY2019 and FY2020, which indicates that TTI's ability to meet the short-term obligations with its most liquid assets has improved in these years.

The liquidity ratio comparison shows that despite the liquidity position improvements in FY2019 and FY2020, TTI may still have room to reduce its current liabilities or increase its current assets in order to improve its liquidity position and become more comparable to LTTC.

4.3.6. Solvency Ratios (Leverage Ratios)

In this section, we will compare the solvency ratios of TTI and LTTC in order to analyze the leverage taken by the companies and the risk for equity investors. The following two main leverage ratios of TTI and LTTC will be compared in this section: 1) debt-to-equity ratio, and 2) debt-to-assets ratio.

Table 10: Solvency ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18
Total Liabilities	THB millions	2,299.52	2,646.46	2,815.12	2,317.09	1,682.24
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42
Total Debt	THB millions	1,816.36	2,198.35	2,230.88	1,612.50	1,098.22
Debt-to-equity	x	1.12x	1.03x	0.79x	0.63x	0.44x
Debt-to-assets	x	0.46x	0.46x	0.39x	0.33x	0.26x
LTTC	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68
Total Liabilities	CNY millions	2,018.60	2,395.55	2,811.94	3,586.13	4,038.23
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90
Total Debt	CNY millions	1,008.94	1,197.88	1,497.13	2,265.47	2,819.71
Debt-to-equity	x	0.14x	0.15x	0.19x	0.27x	0.35x
Debt-to-assets	x	0.11x	0.12x	0.14x	0.19x	0.23x

Source: Calculated from annual reports

From table 10, it was found that the debt-to-equity and debt-to-asset ratios of TTI have been decreasing throughout the studied period whereas those of LTTC has been increasing over the same period. However, the absolute debt-to-equity and debt-to-asset ratios of TTI are still higher than those of LTTC, which indicates that TTI is using more leverage than LTTC. The higher leverage ratios signal that TTI may have a more efficient capital structure as long as the cost of debt is cheaper than the cost of equity for its shareholders. However, on the other hand, it is also worth noting that the higher debt-to-equity and debt-to-assets ratios may lead to higher risks of insolvency and higher risk for TTI's investors, especially for the equity shareholders.

4.4. Projected Financials

Based on the comparative analysis in Section 4.3, we projected the financials of both TTI and LTTC by using a simple extrapolation method in order to explore how the financial ratios with key differences between TTI and LTTC would evolve in the future. In projecting the financials through extrapolation, we excluded FY2020 financials of both TTI and LTTC in order to exclude the effects of the year 2020 when the COVID-19 pandemic severely impacted the financial performance of many companies across various sectors. The projected financials and the projected financial ratios calculated in Section 4.3 can be found in Tables 11 – 16.

Table 11: Projected growth rate comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Revenue	THB millions	3,776.14	3,505.15	3,874.23	2,996.27	1,903.59	2,848.27	2,651.22
% growth	%		*-7.2%*	*10.5%*	*-22.7%*	*-36.5%*	*49.6%*	*-6.9%*
EBITDA	THB millions	269.33	220.53	166.94	204.84	132.92	176.44	164.23
% growth	%		*-18.1%*	*-24.3%*	*22.7%*	*-35.1%*	*33%*	*-7%*
EBIT	THB millions	36.07	(11.50)	(86.60)	(52.60)	(88.40)	(36.02)	(33.53)
% growth	%		*-131.9%*	*653.0%*	*-39.3%*	*68.1%*	*59.3%*	*6.9%*
Net Income	THB millions	(24.10)	524.82	(109.60)	(255.50)	(94.60)	(109.80)	(102.20)
% growth	%		*2277.7%*	*-120.9%*	*N.M.**	*63.0%*	*-16.1%*	*6.9%*
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Revenue	CNY millions	5,990.49	6,409.22	6,879.06	6,801.38	4,751.22	7,535.91	7,826.16
% growth	%		*7.0%*	*7.3%*	*-1.1%*	*-30.1%*	*58.6%*	*3.9%*
EBITDA	CNY millions	1,407.85	1,413.33	1,467.18	1,403.73	573.55	1,531.47	1,590.45
% growth	%		*0.4%*	*3.8%*	*-4.3%*	*-59.1%*	*167.0%*	*3.9%*
EBIT	CNY millions	1,032.30	1,012.55	1,027.96	921.82	103.03	1,001.57	1,040.14
% growth	%		*-1.9%*	*1.5%*	*-10.3%*	*-88.8%*	*872.1%*	*3.9%*
Net Income	CNY millions	808.76	841.15	811.53	952.39	97.31	858.20	891.26
% growth	%		*4.0%*	*-3.5%*	*17.4%*	*-89.8%*	*781.9%*	*3.9%*

Note: N.M.* = Not meaningful

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

Table 11 includes the projected financials and growth rates of TTI and LTTC for FY2021 and FY2022. As noted in section 4.3.1, the revenue growth rate of TTI appears to trend downward and thus, the company is projected to have lower revenue in the future on a business-as-usual basis. Therefore, it indicates that the management would need to tackle the key problem of growing revenue in the future so that TTI can remain competitive in the market in the future. As for LTTC, the company is projected to have strong revenue growth in FY2021 (excluding the effect of COVID-19 pandemic) and is expected to grow steadily in the future.

Table 12: Projected profitability (margins) comparisonbetween TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Revenue	THB millions	3,776.14	3,505.15	3,874.23	2,996.27	1,903.59	2,848.27	2,651.22
Cost of Goods Sold	THB millions	3,519.90	3,318.77	3,769.93	2,873.57	1,889.78	2,727.02	2,538.36
Gross Profit	THB millions	256.24	186.37	104.30	122.70	13.81	121.24	112.86
% margin	%	*6.8%*	*5.3%*	*2.7%*	*4.1%*	*0.7%*	*4.3%*	*4.3%*
Operating Expenses	THB millions	220.17	197.88	190.93	175.33	102.19	157.27	146.39
as % of revenue	%	*5.8%*	*5.6%*	*4.9%*	*5.9%*	*5.4%*	*5.5%*	*5.5%*
Operating Income	THB millions	(11.50)	(86.60)	(52.60)	(88.40)	(86.60)	(57.78)	(53.78)
% margin	%	*-0.3%*	*-2.5%*	*-1.4%*	*-3.0%*	*-4.5%*	*-2.0%*	*-2.0%*
Net Income	THB millions	(24.10)	524.82	(109.60)	(255.50)	(94.60)	(109.80)	(102.20)
% margin	%	*-0.6%*	*15.0%*	*-2.8%*	*-8.5%*	*-5.0%*	*-3.9%*	*-3.9%*
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Revenue	CNY millions	5,990.49	6,409.22	6,879.06	6,801.38	4,751.22	7,535.91	7,826.16
Cost of Goods Sold	CNY millions	4,053.62	4,502.27	4,903.44	4,868.81	3,857.67	5,422.73	5,631.59
Gross Profit	CNY millions	1,936.87	1,906.96	1,975.62	1,932.57	893.55	2,113.18	2,194.57
% margin	%	*32.3%*	*29.8%*	*28.7%*	*28.4%*	*18.8%*	*28.0%*	*28.0%*
Operating Expenses	CNY millions	904.57	894.40	947.66	1,010.75	790.52	1,111.61	1,154.43
as % of revenue	%	*15.1%*	*14.0%*	*13.8%*	*14.9%*	*16.6%*	*14.8%*	*14.8%*
Operating Income	CNY millions	1,032.30	1,012.55	1,027.96	921.82	103.03	1,001.57	1,040.14
% margin	%	*17.2%*	*15.8%*	*14.9%*	*13.6%*	*2.2%*	*13.3%*	*13.3%*
Net Income	CNY millions	808.76	841.15	811.53	952.39	97.31	858.20	891.26
% margin	%	*13.5%*	*13.1%*	*11.8%*	*14.0%*	*2.0%*	*11.4%*	*11.4%*

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

The projected profitability margins of TTI and LTTC for FY2021 and FY2022 can be found in Table 12. Similar to the historical financials, the projected gross profit margin of TTI is only a mid-single-digit percentage which is in stark contrast to LTTC's healthy gross profit margin of almost 30%. Therefore, it is also evidence from our projections that TTI's management will definitely need to resolve the issue of gross profit margin, which would be the first step towards an overall profitability of the company.

Table 13: Projected efficiency ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Cost of Goods Sold	THB millions	3,519.90	3,318.77	3,769.93	2,873.57	1,889.78	2,727.02	2,538.36
Inventory	THB millions	1,129.31	1,116.65	1,115.89	936.67	785.26	756.33	669.53
Inventory Turnover	x	3.0x	3.0x	3.4x	2.8x	2.2x	3.5x	3.6x
Accounts Receivable	THB millions	397.84	362.48	327.60	261.28	157.07	181.70	137.24
Accounts Receivable Turnover	x	7.8x	9.2x	11.2x	10.2x	9.1x	10.6x	10.9x
Accounts Payable	THB millions	204.55	132.25	162.57	129.78	60.55	89.40	70.00
Accounts Payable Turnover	x	18.1x	19.6x	25.6x	18.4x	18.2x	19.7x	19.6x
Cash Conversion Cycle	# days	149.88	144.53	126.31	146.42	186.93	131.78	128.92
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42	4,858.18	4,918.26
Asset Turnover	x	0.9x	0.8x	0.7x	0.6x	0.4x	0.6x	0.5x
Fixed Assets	THB millions	2,236.32	3,119.12	4,011.82	2,923.34	2,546.24	3,094.58	3,136.99
Fixed Asset Turnover	x	1.8x	1.6x	1.4x	1.0x	0.7x	1.0x	0.9x
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Cost of Goods Sold	CNY millions	4,053.62	4,502.27	4,903.44	4,868.81	3,857.67	5,422.73	5,631.59
Inventory	CNY millions	1,817.54	2,100.66	2,093.37	2,421.50	1,988.97	2,739.87	2,920.33
Inventory Turnover	x	2.3x	2.3x	2.3x	2.2x	1.7x	2.3x	2.0x
Accounts Receivable	CNY millions	377.29	473.36	549.27	647.01	760.57	821.50	910.01
Accounts Receivable Turnover	x	14.8x	14.4x	12.8x	10.8x	6.6x	8.4x	7.0x
Accounts Payable	CNY millions	257.64	373.57	353.69	390.57	243.26	476.48	514.38
Accounts Payable Turnover	x	16.2x	15.2x	13.5x	14.0x	10.8x	11.8x	11.0x
Cash Conversion Cycle	# days	162.96	160.13	157.60	176.98	231.15	178.25	182.20
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90	12,951.29	13,655.83
Asset Turnover	x	0.6x	0.7x	0.7x	0.6x	0.4x	0.6x	0.6x
Fixed Assets	CNY millions	6,234.92	6,580.79	7,050.66	7,654.88	7,106.93	7,771.07	8,052.88
Fixed Asset Turnover	x	1.1x	1.1x	1.2x	1.1x	0.8x	1.0x	1.0x

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

Table 13 depicts the projected efficiency ratio comparison between TTI and LTTC and in accordance with our historical financial analysis in Section 4.3.3, TTI's projected efficiency ratios are superior compared to those of LTTC and the management should maintain these healthy efficiency ratios in the future.

Table 14: Projected profitability ratios (returns) comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18	2,975.27	3,191.75
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42	4,858.18	4,918.26
Capital Employed	THB millions	1,747.81	2,494.85	3,308.48	2,901.98	2,754.08	3,367.34	3,609.31
Return on Equity	%	-1.2%	28.8%	-4.3%	-9.3%	-3.7%	-4.0%	-6.4%
Return on Assets	%	-0.5%	12.4%	-2.0%	-4.8%	-2.1%	-2.4%	-4.0%
Return on Capital Employed	%	2.0%	-0.5%	-3.0%	-1.7%	-3.1%	-3.6%	-5.7%
LTTC	**Unit**	**FY2016**	**FY2017**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68	8,412.25	8,593.81
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90	12,951.29	13,655.83
Capital Employed	CNY millions	7,760.97	8,000.40	8,162.86	8,699.21	10,259.00	10,284.95	10,854.43
Return on Equity	%	11.6%	11.6%	11.1%	12.3%	1.1%	10.4%	10.5%
Return on Assets	%	9.2%	9.0%	8.3%	8.8%	0.7%	6.8%	6.7%
Return on Capital Employed	%	13.6%	12.8%	12.7%	10.9%	1.1%	8.4%	8.4%

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

TTI's projected profitability ratios measured in terms of return ratios such as return on equity, return on assets and return on capital employed are in poor shape compared to LTTC. However, as noted in Section 4.3.4, the management should prioritize solving the fundamental issue of gross margin profitability instead of focusing on these ratios.

Table 15: Projected liquidity ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18	2,975.27	3,191.75
Current Liabilities	THB millions	2,167.74	2,277.96	2,346.53	1,985.90	1,404.35	1,490.84	1,308.95
Total Liabilities	THB millions	2,299.52	2,646.46	2,815.12	2,317.09	1,682.24	1,882.91	1,726.51
Current Assets	THB millions	1,679.23	1,653.69	1,643.19	1,964.54	1,612.18	1,763.59	1,781.27
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42	4,858.18	4,918.26
Current Ratio	x	0.77x	0.73x	0.70x	0.99x	1.15x	1.17x	1.27x
Quick Ratio	x	0.25x	0.23x	0.22x	0.26x	0.30x	0.29x	0.30x
LTTC	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68	8,412.25	8,593.81
Current Liabilities	CNY millions	1,703.63	2,170.22	2,374.90	3,186.23	1,870.90	2,666.34	2,801.39
Total Liabilities	CNY millions	2,018.60	2,395.55	2,811.94	3,586.13	4,038.23	4,539.04	5,062.02
Current Assets	CNY millions	3,229.68	3,589.83	3,487.10	4,230.55	5,022.98	5,180.22	5,602.95
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90	12,951.29	13,655.83
Current Ratio	x	1.90x	1.65x	1.47x	1.33x	2.68x	2.18x	2.31x
Quick Ratio	x	0.67x	0.58x	0.48x	0.51x	1.57x	1.28x	1.45x

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

In terms of the projected liquidity ratios, it can be found that the trend of gradual improvement in current ratio and quick ratio of both TTI and LTTC is observed for projected ratios in FY2021 and FY2022. Therefore, TTI's management should focus more on the key issue of poor revenue growth and gross profit margin in the future rather than focusing on the liquidity ratios.

Table 16: Projected solvency ratios comparison between TTI and LTTC

TTI	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total Equity	THB millions	1,616.03	2,126.34	2,839.89	2,570.79	2,476.18	2,975.27	3,191.75
Total Liabilities	THB millions	2,299.52	2,646.46	2,815.12	2,317.09	1,682.24	1,882.91	1,726.51
Total Assets	THB millions	3,915.55	4,772.80	5,655.01	4,887.88	4,158.42	4,858.18	4,918.26
Total Debt	THB millions	1,816.36	2,198.35	2,230.88	1,612.50	1,098.22	1,184.62	982.41
Debt-to-equity	x	1.12x	1.03x	0.79x	0.63x	0.44x	0.40x	0.31x
Debt-to-assets	x	0.46x	0.46x	0.39x	0.33x	0.26x	0.24x	0.20x
LTTC	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total Equity	CNY millions	7,446.00	7,775.08	7,725.82	8,299.30	8,091.68	8,412.25	8,593.81
Total Liabilities	CNY millions	2,018.60	2,395.55	2,811.94	3,586.13	4,038.23	4,539.04	5,062.02
Total Assets	CNY millions	9,464.60	10,170.62	10,537.76	11,885.43	12,129.90	12,951.29	13,655.83
Total Debt	CNY millions	1,008.94	1,197.88	1,497.13	2,265.47	2,819.71	3,164.57	3,633.48
Debt-to-equity	x	0.14x	0.15x	0.19x	0.27x	0.35x	0.38x	0.42x
Debt-to-assets	x	0.11x	0.12x	0.14x	0.19x	0.23x	0.24x	0.27x

Source: Calculated and projected from annual reports

Note: FY2021 and FY2022 numbers are projected financials.

As for the projected solvency ratios, TTI is projected to be deleveraged in FY2021 and FY2022 which is a positive sign from a risk perspective. TTI should continue to strive for a stronger balance sheet so that the company is able to weather periods of economic instability such as the COVID-19 pandemic period.

5. Recommendation

From our study of the comparison of financial ratios between TTI and LTTC, we can identify the following areas of weaknesses for TTI compared to LTTC:

1) Revenue growth rate: The revenue growth rate of TTI is low compared to LTTC's performance.
2) Gross profit margin: This can be considered TTI's main weakness in the overall profitability while compared against LTTC. Despite the outperformance in the operating expense (as a percentage of revenue) of TTI, the net income margin of TTI is much lower and in fact, negative in four of the five financial years in this study, and it is mainly due to the very poor performance in the gross profit margin of TTI.
3) Liquidity position: TTI has a weaker liquidity position compared to LTTC despite the improvements in its liquidity position over the studied period from FY2016 to FY2020.

Based on the above findings, we would like to suggest that TTI's management should explore the following areas for improvement in order to achieve better financial results and ratios as compared to a similar but larger industry peer in China such as LTTC:

1) TTI will need to learn from LTTC to improve its revenue growth rate since its revenue growth performance is lower than the benchmarked LTTC's revenue growth. TTI may need to consider a number of potential solutions such as expanding its geographical presence, product lines or increasing the quality and price of its products in order to achieve higher growth in its revenue.
2) TTI will need to learn from LTTC on how to optimize its COGS in order to achieve better margins. In particular, the procurement process and supplier agreements of TTI should be reviewed and optimized so that the gross profit margin can be improved to the levels similar to that of LTTC. In doing so, TTI's management should perform a cost-benefit analysis of the cost of deploying more resources for procurement vis-à-vis the savings from optimized procurement processes.

3) The liquidity ratio comparison between TTI and LTTC shows that despite the liquidity position improvements in FY2019 and FY2020, TTI may still have room to reduce its current liabilities or increase its current assets when compared to LTTC. Although the liquidity ratios alone may not be the key weakness on its own, the weak performance in profitability of TTI could exacerbate the liquidity problem of TTI and therefore, TTI should improve its liquidity position in order to have a more robust balance sheet which is comparable to that of LTTC.

6. Conclusion

In this study, we evaluated the financial performance of LTTC and TTI and compared the performance of TTI against that of LTTC. From our analysis, we have identified that the key areas of weakness for TTI are: 1) revenue growth rate, 2) gross profit margin and 3) liquidity position. As such, we recommended that TTI's management should try to improve or address the key issues in these three areas in order for TTI to improve its financial performance and become a comparable (from a financial ratio analysis perspective) company to a much larger player in a bigger market such as LTTC.

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