

LEVEL 7 ASSESSMENT SPECIFICATION

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Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

Executive Summary

Toyota Motor Corporation (TMC) is specialized in automobile production, however, the most valuable business is the material handling requirement section, instead of the automobile section; and the USA is the largest market of TMC.

This report analyzes the past 3 years (2021 to 2023) financial situation with other automobile competitors Honda Motor Co Ltd, and Mazda Motor Corp. TMC has the strongest cash flow and highest volume of income, and less fixed assets.

In recent years, the global situation is not stable for the economy, which is related to the Ukraine situation, high inflation of Japan, and rapid deprecations of the Japanese Yen. However, those factors assist the growth of developing economic countries, such as India, Saudi Arabia, South Africa, etc.

India as a developing country, there is a huge demand for material handling requirements, the market value was JPY 4,351.540 million in 2021, and it will reach JPY 7,460.001 million by 2029.

The investment product will be located in India with a machinery loan company, the period is 5 years with a preparation year (9 months). The initial cost is JPY 700.144, with less than 25 months payback period, and the net gain will be reached 70.8%.

Table of Contents

	Page
1. Introduction	
1.1 Company Background	3 - 4
1.2 Operating Business Overview	5 - 6
1.3 Today's Business Environment	7 - 8
1.4 Company Structure	9
1.5 Research Comparison Company Information	10
 2. TMC's Financial Analysis	
2.1 Listed Company Bankruptcy Index Z-Score Analysis	12
2.2 Financial Structure	13 - 15
2.3 Paying Debt Ability	16 - 20
2.4 Operating Ability	20 - 21
2.5 Profitability	21 - 27
2.6 Growth Ability	28
2.7 Stock Market Prospects Analysis	29
 3. TMC's Corporate Governance Assessment	
3.1 Connected Transaction Through the Minority Shareholders Interest	31
3.2 Monitor Board of Direct Failure	31
3.3 Credit Risk	32
3.4 Recommendation	33
 4. Investment Project Appraisal	
4.1 Investment Description	35
4.2 Investment Criteria	36 - 44
4.3 Conclusion and Recommendation	45 - 46
4.4 Investment Schedule at the First Year	47
 5. References	
6. Appendix	

1. Introduction

This section presents the company background of Toyota Motor Corporation (TMC), overview of operating business, current business environment, and company structure from 2021 to 2023.

1.1 Company Background

TMC is a Japanese automotive company which produced automobiles in 1933, and was established in 1937 (Toyota Motor Corporation, 2024a). TMC has 271 consolidated subsidiaries around the world (Toyota Motor Corporation, 2023a).

The core of earning from TMC are automobile and materials handling requirement section (Toyota Motor Corporation, 2023a).

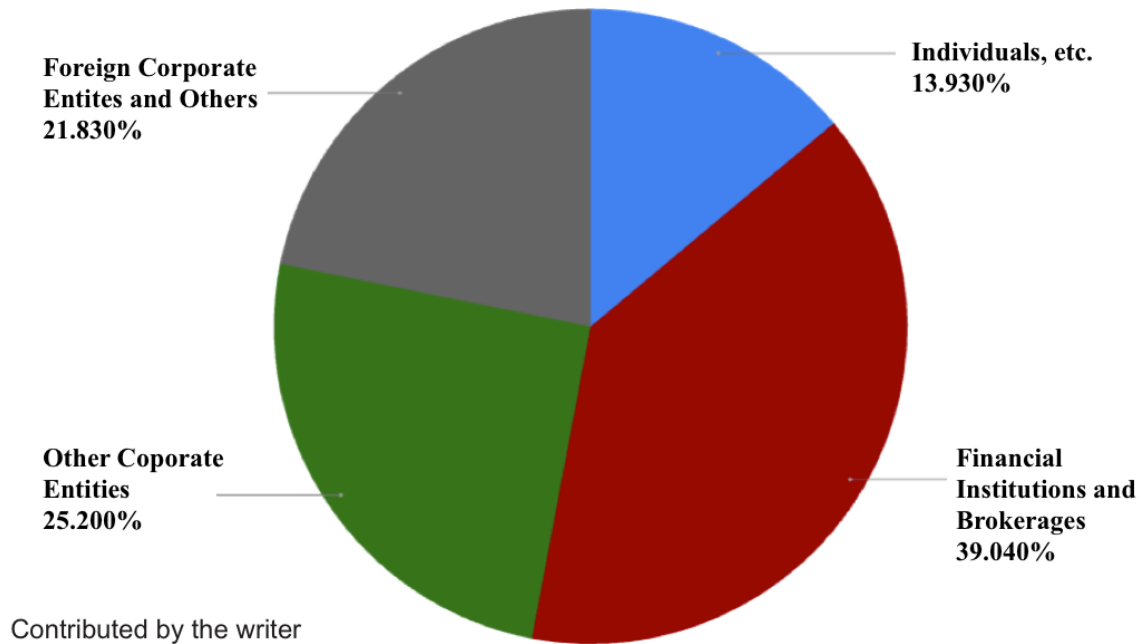
According to Toyota Motor Corporation (2024c), Toyota's value lies in integrating software, hardware, and collaborations to generate distinctive value rooted in the principles of the Toyota Way. Moreover, TMC believes it can provide high value-added products which combine technology, quality, and cost fabulously in automobile and materials handling requirement businesses (Toyota Motor Corporation, 2023a).

TMC is listed in different stock markets in Japan (Tokyo, Nagoya), New York, and London (Toyota Motor Corporation, 2024d). Table 1.0 presents the overall stock information for TMC (Yahoo! finance, 2024a, 2024b, 2024c).

Table 1.0: Overall Stock Information of Toyota Motor Corporation			
Stock Listing(s)	Japan	New York ^{*1}	London
Stock Code	7203.T	TM	TITLE
Stock Value (JPY)*1	2,529.00	24,895.52	2,447.50
Market Capital (JPY in Millions)	34,065.00	181,078,963.58	32,967.00
Note 1: USD convert to JPY on 11-Aug-2024, Yahoo! Finance 2024d			
Note 2: Stock market closing date on 9 August 2024 with Adjust Close Value, Yahoo! finance 2024a, 2024b, 2024c			
Contributed by the writer			

According to Toyota Motor Corporation (2024d), financial institutions and brokerages held ~39% of the total number of shares issued (refer to Figure 1.0).

Figure 1.0: Ownership Breakdown of Toyota Motor Corporation (Closing date on 31-March-2023)

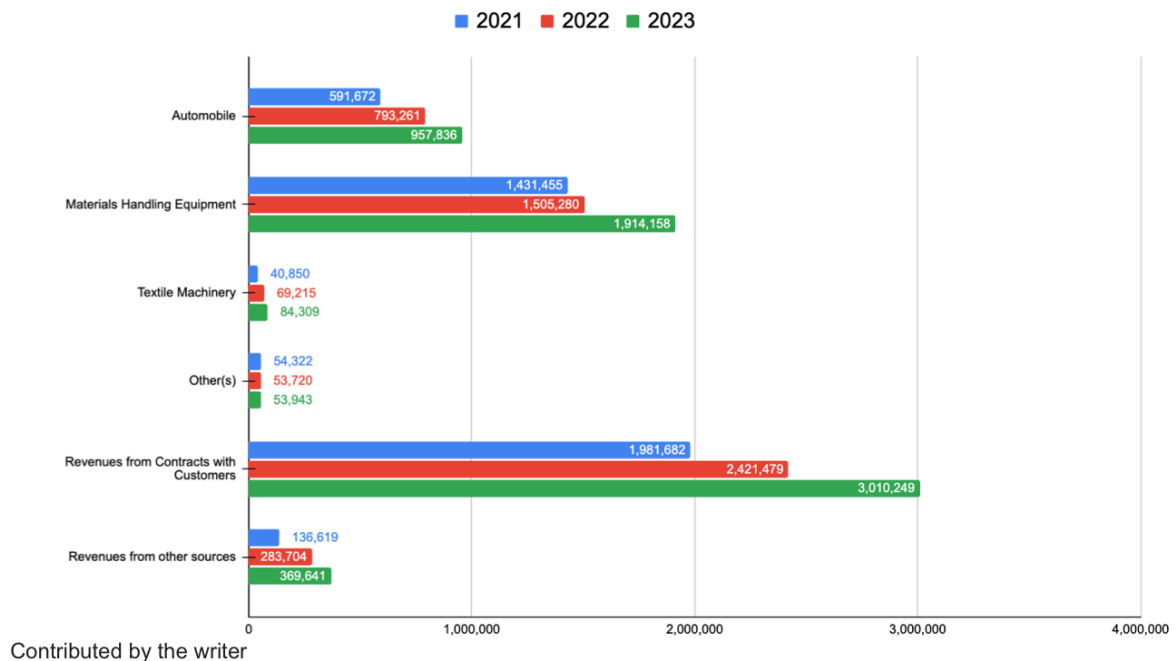


1.2 Operating Business Overview

According to Toyota Motor Corporation (2023), sales revenues of TMC generated by different types of products, namely, vehicle, materials handling equipment, textile machinery, revenues from contracts with customers, and from other resources such as stock, bonds, insurance, foreign currency translation (as Figure 2.0).

Figure 2.0 demonstrated that the automobile sector was not getting the main segment for TMC, less than 16% in 2022, and dropped 1% in 2023. The section of revenues from Contracts with customers was taking 47% of total revenue in 2022 and 2023.

Figure 2.0: Disaggregation of Revenue from 2021 to 2023 (Million in JPY)

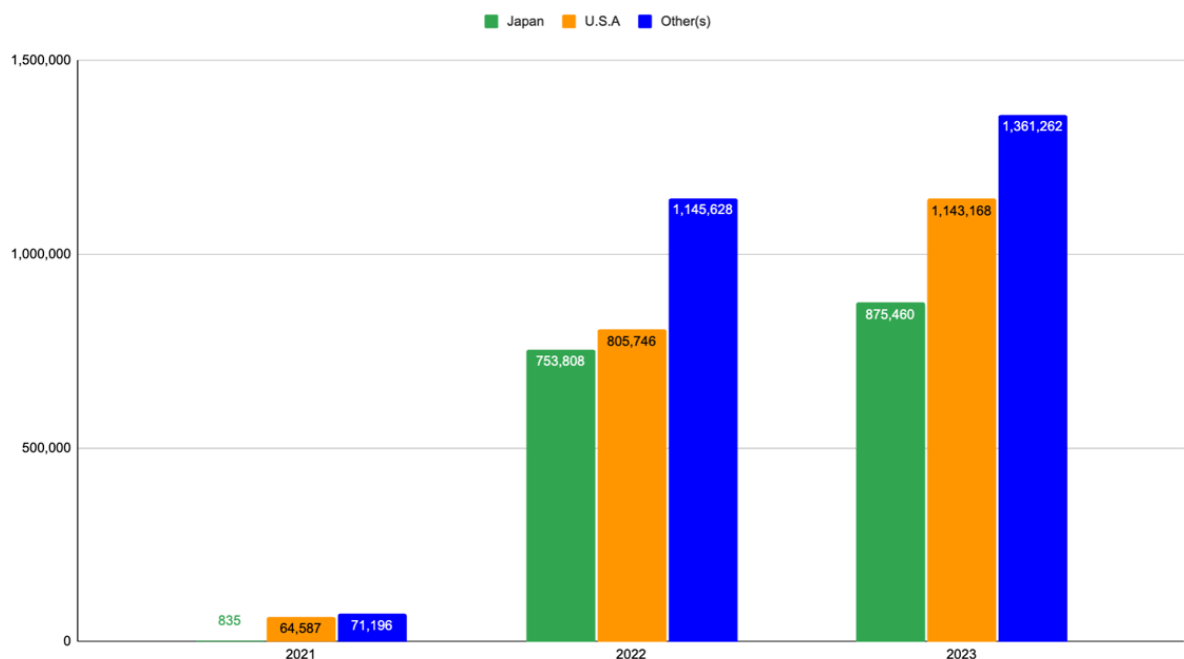


Toyota Motor Corporation (2023a), the highest increase percentage of operating profit was materials handling equipment markets in 2023, which increased 7%. The total operating profit was JPY 169,900 million, and materials handling requirement markets was JPY 121,800 million, the percentage was 28.31% in the total operating profit (Toyota Motor Corporation, 2023a).

Toyota's product sites are located worldwide, including North America, Latin America, Europe, Africa, and Asia Pacific (Toyota Motor Corporation, 2024b). Figure 2.0 shows the sales breakdown of geography of Japan, USA, and Others, compared to 2022 and 2023 (Toyota Motor Corporation, 2023).

Total sales increased JPY 674,708 million in 2023, it rose 18.82%, compared to 2022. Moreover the sales from the USA were growing 4.03% in 2023. Moreover, the USA market was taking 42.35% total of sales for TMC in 2023.

Figure 3.0: Sales Breakdown by Geography of Toyota Motor Corp. from 2021 to 2023 (Million in JPY)



Contributed by the writer

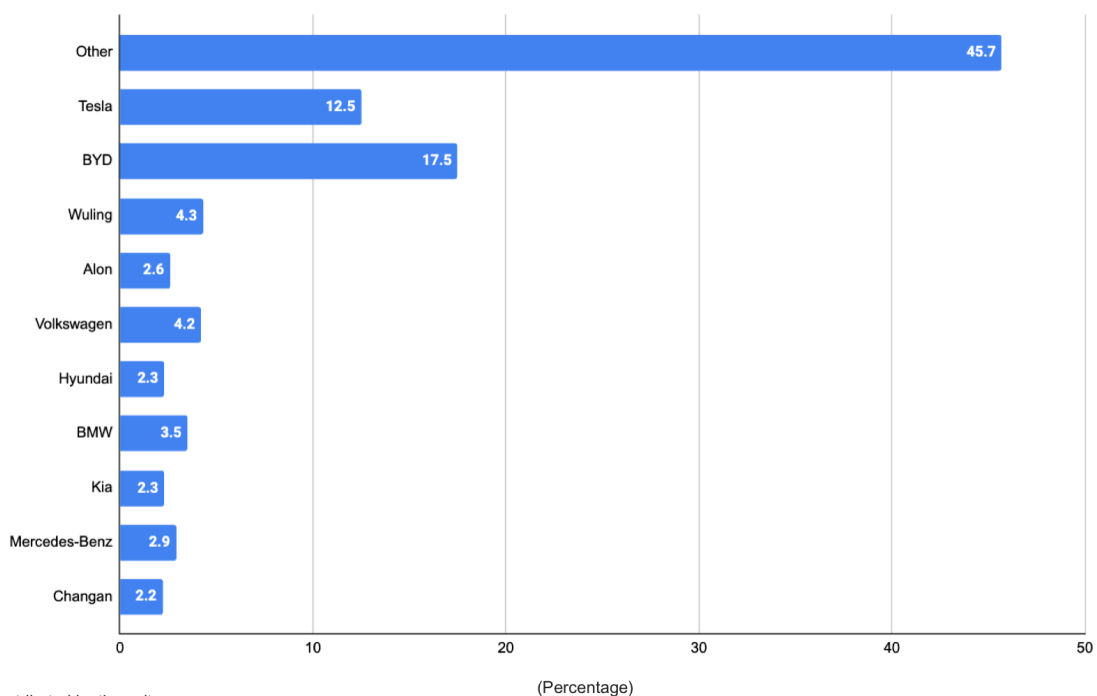
Source: Toyota Motor Corporation 2021, 2022, 2023a

1.3 Today's Business Environment

- Automobile Market

The trend of electric cars (EV) has affected the global market in recent years, the sales revenue of EVs increased 232%, compared 2021 to 2023 (Statista, 2023). Based on the EV trend, it also impacted the market share of the automobile manufacturer (refer to Figure 4.0), the Chinese car makers are taking more segmentation, compared to traditional car marker brands.

Figure 4.0: Elective Automobile Sales by Maker in 2022



Contributed by the writer
Source: Statista 2023

Tesla as the one of the leaders in EV providers stated that hydrogen vehicles may be replaced by EV products, Tesla will not produce any new EV vehicles and its first hydrogen product is going to mass production and launch to the global market in 2026 (Garcia, 2024).

- **Materials Handling Markets**

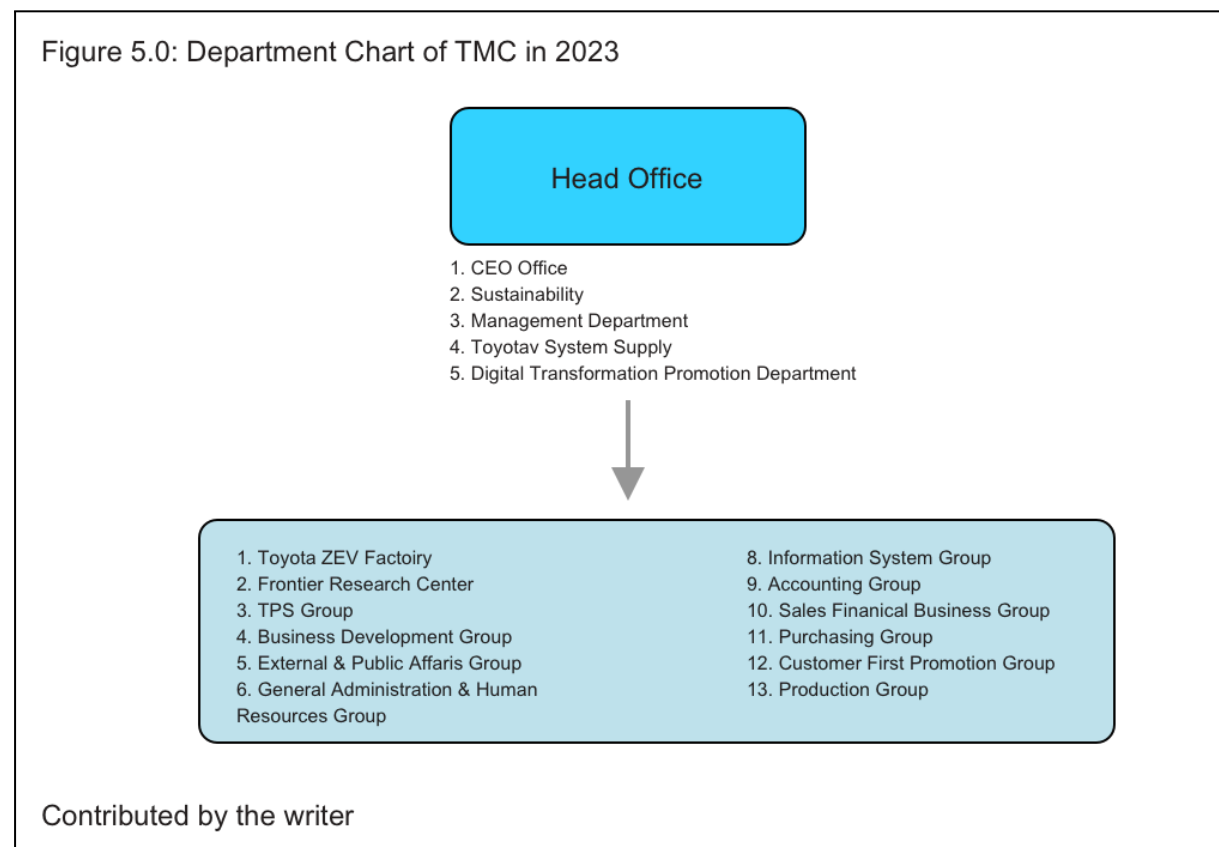
According to Research and Markets (2024), the global materials handling market value was estimated JPY 24,620,493.17 million in 2022, and the market value will achieve JPY 41,928,041.19 million by 2029, and the market forecast to grow at a CAGR of 7.9%.

The market of Asia Pacific is estimated to have significant growth Region, boosted by industrialization and increased manufacturing activities in countries like China, India, and South Korea, such as large amount investment in construction and infrastructure, those investments are backed by governmental initiatives, all types of developments have been create the demand for materials handling section (Research and Markets, 2024).

In the materials handling business, TMC has a 5 year business plan on production and sales strategies, including customerization products which are based on the customer geolocation, especially in the local market conditions, and capital expenditure plans (Toyota Motor Corporation, 2023a).

1.4 Company Structure

According to the Integrated report in 2023, there are 8 different positions under chief executive officer, and 13 departments at the head office as Figure 5.0 (Toyota Motor Corporation, 2023).



In 2023, the total employees of TMC increased 0.64%, compared to 2022; and the actual number of full-time employees is 375,235 in 2023 (Toyota Motor Corporation, 2024e and 2024f).

1.5 Research Comparison Company Information

This report compared 2 different worldwide automobile markers with TMC, namely, Honda Motor Co Ltd (Honda), and Mazda Motor Corp (Mazda); the selected companies are found in Japan, with the same primary business operations (refer to Table 2.0).

Table 2.0: Research Comparison Company Information (Updated to 31-Mar-2023)

Company Name	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Stock Number in Japan	7203.T	7267.T	7261.T
Business Nature	Automobile Manufacturer		
Market Value ^{*1} (Millions of yen)	35,054	12,402	5,247
Volume of Stock	15,443,400	11,004,200	4,356,800
PE ^{*1} (profit earning)	10.09	9.14	5.41
Market Area	Global		

Note 1: Stock market closing date on 30-Mar-2023, GuruFocus 2024a, 2024b, 2024c

2. TMC's Financial Analysis

This section will evaluate TMC financial performance, comparing Honda and Mazda with three financial years for 2021, 2022, and 2023. Table 2.1 and Table 2.2 demonstrated the overall financial information of selected companies; the current net current assets increase stably in TMC as 52.65% (JPY 400,070 million), compared 2021 to 2023.

Table 2.1: Fainacial Analysis for TMC, Honda, and Mazda (between 31-Mar- 2021 to 31-Mar-2023)

Name of Company	Year	Net Current Assets (Million in JPY/ YEN)	Total Assets (Million in JPY/ YEN)	Retained Earnings (Million in JPY/ YEN)	Earnings before interest and taxes (EBIT) (Million in JPY/ YEN)
Toyota Motor Corp	2021	759,842	6,503,986	1,369,775	184,011
	2022	883,106	7,627,120	1,514,657	246,123
	2023	1,159,912	7,821,185	1,652,648	262,967
Honda Motor Co Ltd	2021	1,863,634	21,921,030	914,053	2,202
	2022	2,837,026	23,973,153	1,070,190	112,399
	2023	2,926,224	24,670,067	879,565	169,972
Mazda Motor Corp	2021	681,945	2,917,414	508,784	2,202
	2022	558,880	2,968,148	581,458	112,399
	2023	462,944	3,259,251	699,231	169,972

Contributor by the writer

Net sales had significant increase from 2021 to 2023, TMC increased 59.55%, the percentage of Honda was 28.36%, and Mazda was 25.69% (refer to Table 2.2); this impact may be influenced by the end-of-covid-pandemic.

Table 2.2: Fainacial Analysis for TMC, Honda, and Mazda (between 31-Mar- 2021 to 31-Mar-2023)

Name of Company	Year	Stock Value (JYP / YEN) *1	Total Current Assets (Million in JPY/ YEN)	Number of Stock (Million Shares)	Total Liabilities (Million in JPY/ YEN)	Net Sales (Million in JPY/ YEN)
Toyota Motor Corp	2021	1837.76	1,948,081	80,462	3,181,436	2,118,302
	2022	2050.73	2,255,827	80,462	3,605,152	2,705,183
	2023	2269.83	2,677,024	80,462	3,885,784	3,379,891
Honda Motor Co Ltd	2021	978.8	7,579,091	86,067	12,548,191	13,170,519
	2022	1080.28	8,841,425	86,067	13,200,607	14,552,696
	2023	1126.99	9,578,348	86,067	13,167,776	16,907,725
Mazda Motor Corp	2021	833.71	1,489,595	283,957	1,721,584	2,882,066
	2022	858.85	1,457,813	283,957	1,651,451	3,120,349
	2023	1,204.37	1,724,164	283,957	1,802,450	3,826,752

Note 1: Stock Value is display by dollor of yen, and stock market closing date on 31-Mar-2021, 31-Mar-2022, and 31-Mar-2023.

Contributor by the writer

2.1 Listed Company Bankruptcy Index Z-Score Analysis

Through the analysis of Z-Score, the stakeholder can get the insights and the financial conditions (predicted risk of bankruptcy) of TMC, Honda, and Mazda which can assist the stakeholder to make better decisions in different fields, such as investment and leading (Altman, Hotchkiss, and Wang, 2019).

Table 3.0: Table 3: Z-Score Analysis for Toyota Motor Corp, Honda, and Mazda (between 31-Mar- 2021 to 31-Mar-2023)

	Toyota Motor Corp			Honda Motor Co Ltd	Mazda Motor Corp
Millions of YEN (Year)	2021	2022	2023	Average from 2021 to 2023	
A = Working Capital/ Total Assets	0.1168	0.116	0.148	0.107	0.188
B = Retained Earnings/Total Assets	0.2106	0.199	0.211	0.403	0.195
C = EBIT / Total Assets	0.0089	0.032	0.034	0.041	0.030
D = (Stock value x Total number of stocks)/Total Liabilities	0.0089	0.006	0.003	0.001	0.003
E = Sales / Total Assets	0.3257	0.355	0.432	0.631	1.071
Z Score	0.7951	0.882	1.018	1.458	1.670
Contributor by the writer					

According to Elliott and Elliott (2019), the Z-Score of TMC was below 1.8 which has a high risk of bankruptcy, this unhealthy ratio may influence the investor confidence, and cause the higher interest rate from the financial parties.

2.2 Financial Structure

Table 4.0 shows the financial health, liquidity, leverage and asset management for selected companies; those ratios can assist stakeholders make decisions of the investment, leading and corporate of financial management strategies (Gabrielli, 2023).

Table 4.0: Financial Structure of TMC, Honda and Mazda					
	Toyota Motor Corp			Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	Average from 2021 to 2023	
Fixed Asset to Long Term Liability Ratio	2.286	2.406	2.171	2.173	2.135
Current Liabilities to Net Asset Ratio	0.358	0.341	0.386	0.582	0.741
Current Liabilities to Stock Ratio	4.063	3.163	2.893	2.688	1.998
Contributor by the writer					

2.2.1 Fixed Asset to Long Term Liability Ratio

The average ratio of TMC was 2.287, maintained above 2.1, which shows the healthy and stable financial position; TMC has the ability to pay back its long-term liabilities with fixed assets (Sabri, 2023).

2024 Consolidated Statement shows that the other financial assets take more than 60% of the total non-current assets, refer to Appendix 1.0.

Appendix 1.0: TMC Consolidated Financial Statements 2023

[Consolidated Financial Statements and Other]			
I. [Consolidated Financial Statements]			
[Consolidated Statement of Financial Position]			
		(Millions of yen)	
	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Assets			
Current assets			
Cash and cash equivalents	5	247,085	202,731
Time deposits with deposit terms of over three months		328,674	420,173
Trade receivables and other receivables	6	1,121,491	1,398,757
Other financial assets	7	12,672	5,399
Inventories	8	433,961	524,385
Income tax receivables		28,906	26,262
Other current assets		83,034	99,313
Total current assets		2,255,827	2,677,024
Non-current assets			
Property, plant and equipment	9, 30	1,134,074	1,237,540
Goodwill and intangible assets	10, 30	395,882	468,368
Trade receivables and other receivables	6	2,334	1,459
Investments accounted for by the equity method	11	21,337	23,987
Other financial assets	7	3,734,978	3,338,505
Net defined benefit assets	17	37,408	27,887
Deferred tax assets	25	39,908	37,992
Other non-current assets		5,368	8,421
Total non-current assets		5,371,292	5,144,161
Total assets		7,627,120	7,821,185

The accompanying notes are an integral part of these financial statements.

2.2.2 Current Liabilities to Net Asset Ratio

Table 4.0 shows the scale of TMC of current debt to its net assets; the average ratio of TMC amounted to 0.3617, which shows the TMC has the most healthy liquidity position, compared with Honda and Mazda (Davidson,2020).

Table 4.0: Financial Structure of TMC, Honda and Mazda

	Toyota Motor Corp			Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	Average from 2021 to 2023	
Fixed Asset to Long Term Liability Ratio	2.286	2.406	2.171	2.173	2.135
Current Liabilities to Net Asset Ratio	0.358	0.341	0.386	0.582	0.741
Current Liabilities to Stock Ratio	4.063	3.163	2.893	2.688	1.998

Contributor by the writer

Two fields are taking strong impact of current debt, trade payable and other payable, corporate bonds and loans (Appendix 1.1, which mainly pay for the financial liabilities at amortized cost, and the corporate bonds and loans were increased 10.94% in 2022 to 2023.

Appendix 1.1: TMC Consolidated Financial Statements 2023

	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Liabilities and Equity			
Liabilities			
Current liabilities			
Trade payables and other payables	12	745,553	807,474
Corporate bonds and loans	13	468,504	519,749
Other financial liabilities	14	82,909	83,749
Accrued income taxes		27,281	29,696
Provisions	16	15,415	41,827
Other current liabilities		33,058	34,615
Total current liabilities		1,372,721	1,517,112
Non-current liabilities			
Corporate bonds and loans	13	922,011	1,179,390
Other financial liabilities	14	95,237	104,404
Net defined benefit liabilities	17	91,677	81,422
Provisions	16	11,809	11,025
Deferred tax liabilities	25	1,078,641	952,960
Other non-current liabilities		33,054	39,467
Total non-current liabilities		2,232,430	2,368,671
Total liabilities		3,605,152	3,885,784
Equity			
Share of equity attributable to owners of the parent			
Capital stock	18	80,462	80,462
Capital surplus	18	102,388	101,245
Retained earnings	18	1,514,657	1,652,648
Treasury stock	18	(59,339)	(59,345)
Other components of equity	18	2,290,343	2,062,404
Total share of equity attributable to owners of the parent		3,928,513	3,837,416
Non-controlling interests		93,454	97,985
Total equity		4,021,967	3,935,401
Total liabilities and equity		7,627,120	7,821,185

Resource: Toyota Motor Corporation, 2023a

2.2.3 Current Liabilities to Stock Ratio

TMC has the highest ratio at an average 3.773, compared to Honda and Mazda (as Table 4.0), which means TMC has the highest current debt to its inventory (Gitman, McDaniel, and Shah, 2023). However, this ratio was decreasing each year 22.15% in 2022 and 8.5% in 2023. This ratio may be influenced by disease, political factors, terrorism, wars and other social factors (Toyota Motor Corporation, 2024e).

Table 4.0: Financial Structure of TMC, Honda and Mazda

	Toyota Motor Corp			Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	Average from 2021 to 2023	
Fixed Asset to Long Term Liability Ratio	2.286	2.406	2.171	2.173	2.135
Current Liabilities to Net Asset Ratio	0.358	0.341	0.386	0.582	0.741
Current Liabilities to Stock Ratio	4.063	3.163	2.893	2.688	1.998
Contributor by the writer					

This ratio measures the proportion of a company's current liabilities relative to its net assets.

2.3 Paying Debt Ability

Table 5.0 displays the paying debt ability of TMC, Honda and Mazda; those figures are showing the financial health and sustainability of each company (Bhalla, 2020), and important to demonstrate financial stability and credibility (Rogoff, Abbas, and Pienkowski, 2019).

	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

2.3.1 Current Ratio (%), Quick Ratio (%)

This ratio was increasing slowly each year for TMC, it indicated TMC had a healthy liquidity position, and the total current assets increased to JPY 421,197 million, but the cash decreased 17.95%, due to the operating activities.

Appendix 1.0: TMC Consolidated Financial Statements 2023

[Consolidated Financial Statements and Other]

I. [Consolidated Financial Statements]

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		(Millions of yen)	
	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Assets			
Current assets			
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Other financial assets	7	3,734,978	3,338,505
Net defined benefit assets	17	37,408	27,887
Deferred tax assets	25	39,908	37,992
Other non-current assets		5,368	8,421
Total non-current assets		5,371,292	5,144,161
Total assets		7,627,120	7,821,185

The accompanying notes are an integral part of these financial statements.

Appendix 1.0 shows the inventories increased 17.24%, which matches with the indicator of Table 5.0. TMC has the highest ratio, meaning its current assets consist of a significant portion of assets other than inventory.

	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit Index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

2.3.2 Stock Credit Index

Selected companies have a negative index of the stock credit, which means the inventory level is low due to the car industry, and the lack of chips (Smithers, 2022); also the trend of the car industry - pay now gets later (Fessler, 2019). TMC was 3.71 times and 5.79 times higher than its competitors, which shows the sales volume was higher than Honda and Mazda.

	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit Index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

2.3.3 Cash Ratio (%)

TMC's cash ratio decreased each year, due to increased payment for the financial liabilities at amortized cost, and the corporate bonds and loans (refer to Section 2.2.2). Although Mazda has the highest ratio as 199.38%, which means Mazda has the ability to settle debts, and the senior management is lacking financial planning to bring extra value to stakeholders.

Table 5.0: Paying Debt Ability of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

2.3.4 Total Debt Ratio (%), Debt to Equity Ratio, Long Term Debt Ratio, Debt to Assets Ratio

Table 5.0 shows the debt related ratio or index was increasing each year. After ending of COVID-19, the business activities became normally, TMC asked for the loan for development business, regarding to Appendix 1.1 shows the the high percentage of corporate bonds and loans increased JPY 257,379 million a year, approximately 21.82%, compared 2022 to 2023.

	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit Index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

Appendix 1.1: TMC Consolidated Financial Statements 2023

	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Liabilities and Equity			
Liabilities			
Current liabilities			
Trade payables and other payables	12	745,553	807,474
Corporate bonds and loans	13	468,504	519,749
Other financial liabilities	14	82,909	83,749
Accrued income taxes		27,281	29,696
Provisions	16	15,415	41,827
Other current liabilities		33,058	34,615
Total current liabilities		1,372,721	1,517,112
Non-current liabilities			
Corporate bonds and loans	13	922,011	1,179,390
Other financial liabilities	14	95,237	104,404
Net defined benefit liabilities	17	91,677	81,422
Provisions	16	11,809	11,025
Deferred tax liabilities	25	1,078,641	952,960
Other non-current liabilities		33,054	39,467
Total non-current liabilities		2,232,430	2,368,671
Total liabilities		3,605,152	3,885,784
Equity			
Share of equity attributable to owners of the parent			
Capital stock	18	80,462	80,462
Capital surplus	18	102,388	101,245
Retained earnings	18	1,514,657	1,652,648
Treasury stock	18	(59,339)	(59,345)
Other components of equity	18	2,290,343	2,062,404
Total share of equity attributable to owners of the parent		3,928,513	3,837,416
Non-controlling interests		93,454	97,985
Total equity		4,021,967	3,935,401
Total liabilities and equity		7,627,120	7,821,185

2.3.5 Time Interest Cover Ratio

This ratio shows TMC has the ability to pay its interest payable with its EBIT, it shows a positive financial performance to the stakeholders. The average ratio accounted for 36.545 which is the leading position of the competitors.

Table 5.0: Paying Debt Ability of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Current Ratio (%)	1.639	1.643	1.765	1.413	1.611
Quick Ratio (%)	1.393	1.327	1.419	1.108	1.101
Stock Credit Index	-1.598	-1.035	-1.212	-0.345	-0.221
Cash Ratio (%)	20.05%	18.00%	13.36%	55.43%	199.38%
Total Debt Ratio (%)	48.92%	47.27%	49.68%	55.23%	55.65%
Debt to Equity Ratio ^{*1}	1.010	1.040	1.070	0.787	1.040
Long Term Debt Ratio ^{*1}	0.580	0.600	0.620	0.473	0.333
Debt to Assets Ratio ^{*1}	0.390	0.400	0.410	0.343	0.190
Time Interest Cover Ratio	33.888	49.234	26.511	8.182	28.177

Note1: Trading View 2024a, 2024b, 2024c

2.4 Operational Ability

This section analyzed the operational ability for selected companies, including how those companies manage their resources, and figure out the advantage after comparison with the competitors.

Table 6.0 shows the operating expenses of TMC, Honda, and Mazda, the table shows TMC has lower employee costs, Honda had extra 55.43% expenses of labor. TMC has the advantage of saving rental costs, the average was JPY 869.79 million from 2021 to 2023.

Table 6.1: Operating Expenses of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Millions of YEN (Year)	2021	2022	2023	3 Years Average from 2021 to 2023	
Employee Costs	577,257.00	667,382.00	809,314.00	1,536,209.00	121,609.00
Depreciation and Amortization	209,839.00	223,737.00	257,762.00	1,499,634.00	95,332.00
Rental Expenses	909.00	833.00	867.00	75,414.33	7,937.33
Research and Development	76,105.00	86,192.00	101,775.00	802,228.00	130,015.00

TMC relied on different types of suppliers outside its organization, and it built a stable transaction with those vendors globally (Toyota Motor Corporation, 2024e); It makes TMC with the lowest times of total assets turnover compared to the competitors. TMC has the most positive bargaining power to the suppliers, the payment period was >2 times for Honda and Mazda (Table 6.2).

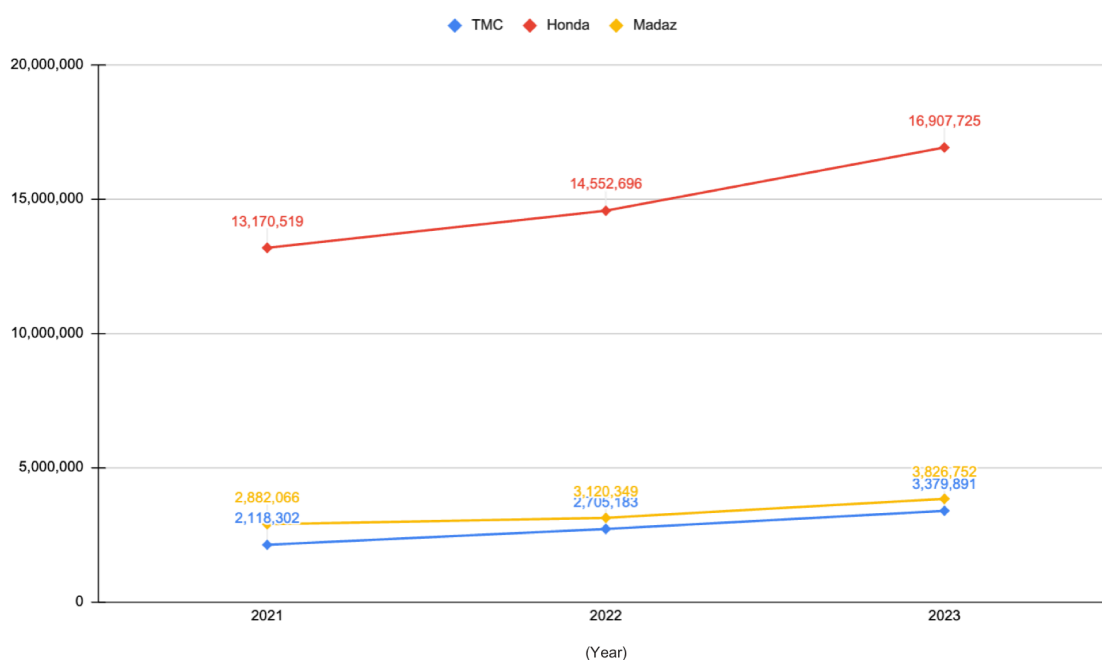
Table 6.2: Operating Expenses of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Total Assets Turnover (Times)	0.3256	0.354678	0.4321	0.63	1.07
Average Collection Period (days)	166	152	152	23	19
Day's Sales in Inventory (days)	66	75	73	58	71
Payment Period (days)	73	66	61	33	26

2.5 Profitability

The global economy is recovering from the COVID-19 from 2021 (Asian Development Bank, 2022), but the raw materials, parts, and fuel price may be influenced by the Ukraine situation (Struk, Prokop, and Struk, 2024); a higher interest rates in different countries which is a sign for economic recession arising (Kose and Ohnsorge, 2020); plus the high inflation of Japan, rapid depreciation of the JPY (Mayer and Schnabl, 2022).

The net sales of select companies are growing from 2021 to 2023, all companies have a positive growth from 2021 to 2023 (as Figure 8.0).

Figure 8.0: Net Sales of TMC, Honda, Mazda (from 2021 to 2023), Million in JPY



2.5.1 Net Profit Growth

Table 7.0 shows the net profit of TMC was increasing each year, 23.69% in 2022 and 6.73% in 2023. In 2023., the net profile growth dropped from 31.05% to 7.21%, compared to 2022. This result may cause an economic recession arising, instead of depreciation of the JPY; according to Figure 3.0 which shows Japan was the most minimal market for TMC in 2021 to 2023.

Table 7.0: Profitability Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Net Profit (Million of YEN)	141,435	185,350	198,716	724,485	62,844
Net Profit Growth (%)	5.83%	31.05%	7.21%	18.76%	-38%
Gross Profit Margin	23.15%	22.46%	22.37%	20.32%	21.43%
Net Profit Margin	6.67%	6.85%	5.28%	4.92%	1.76%

Figure 3.0: Sales Breakdown by Geography of Toyota Motor Corp. from 2021 to 2023 (Million in JPY)



Contributed by the writer

Source: Toyota Motor Corporation 2021, 2022, 2023a

2.5.2 Gross Profit Margin

This ratio was average for selected companies (Table 7.0), this situation may have been caused by the highest exchange rate; however, a high number of this margin will be a favor for corporate (Corelli, 2023).

2.5.3 Net Profit Margin

The high number of net profit margins is an advantage for organizations (Corelli, 2023). The average ratio of TMC was 6.27%, it was higher than Honda (27.44%) and Mazda (256.25%). However, the net profit margin dropped in 2022 again, which related to the global economic impacts.

2.5.4 Total Assets Turnover (Times)

As Table 7.1, TMC was in the lowest position to earn sales with its assets, the average was 0.371 times from 2021 to 2023. The reason might be related to the high volumes of global suppliers, TMC did not need many assets, such as factories, machines or etc, compared to Honda and Mazda. Moreover, automobile business is not the main sales sector, refer to Figure 2.0.

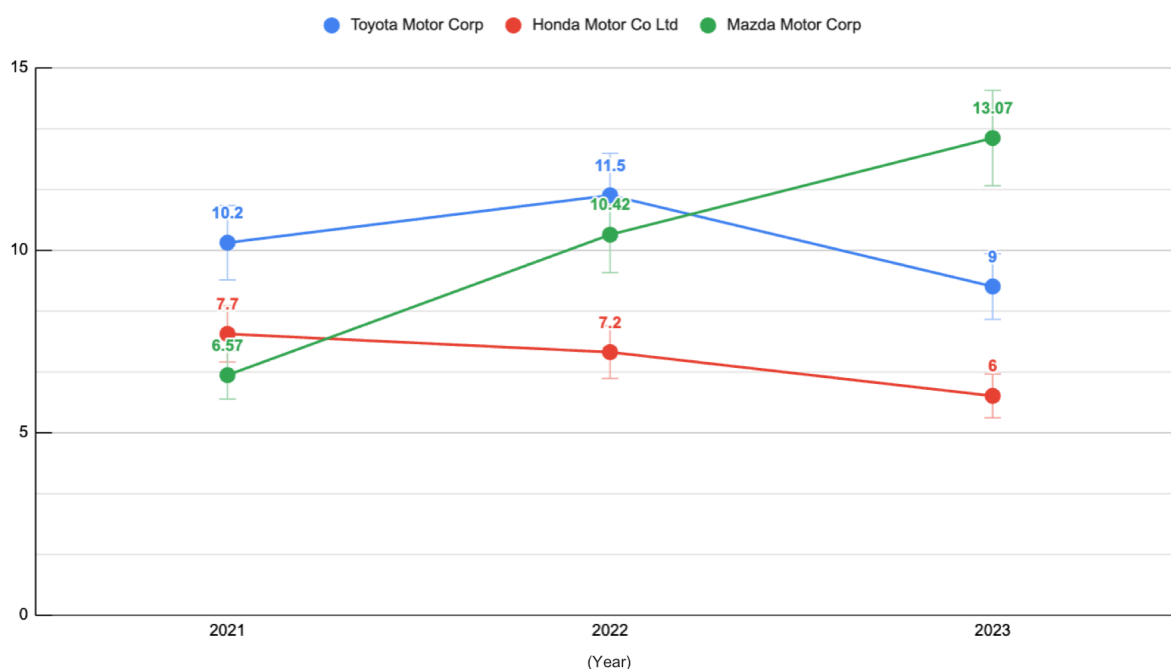
Table 7.1: Profitability of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Total Assets Turnover (Times)	0.326	0.355	0.432	0.631	1.071
Equity Multiplier (EM)	0.511	0.527	0.503	0.448	0.433
Return on Equity (After Tax) (%) ³¹	11.48	8.98	15.81	7.50	10.05
Return on Assets (After tax) (%) ³¹	4.39	3.45	6.02	3.28	4.42

Note1: Trading View 2024a, 2024b, 2024c

2.5.5 Equity Multiplier

This ratio was dropping of TMC, unlike Honda and Mazda (refer to Figure 9.0), especially of 2021, but Mazda was decreasing stably starting from 2021. Compared to the net sales as Figure 8.0, it shows TMC has the right strategy of production but the assets of property, plant and equipment increased 8.36% in 2023 (Appendix 1.0).

Figure 9.0: Equity Multiplier (%) of Toyota Motor Corp, Honda Motor Co Ltd, and Mazda Motor Corp from 2021 to 2023



Contributed by the writer

Source: Toyota Motor Corporation, 2021, 2022, 2023a ., Honda Motor Co., 2021, 2022, 2023., and Mazda, 2021, 2022, 2023.

Appendix 1.0: TMC Consolidated Financial Statements 2023

[Consolidated Financial Statements and Other]
I. [Consolidated Financial Statements]
[Consolidated Statement of Financial Position]

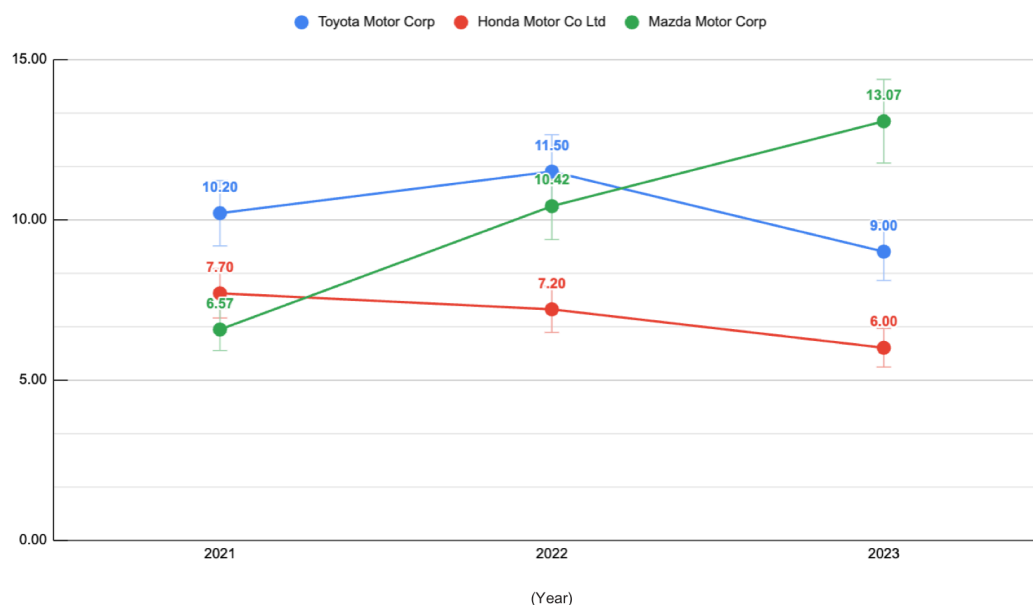
		(Millions of yen)	
	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Assets			
Current assets			
Cash and cash equivalents	5	247,085	202,731
Time deposits with deposit terms of over three months		328,674	420,173
Trade receivables and other receivables	6	1,121,491	1,398,757
Other financial assets	7	12,672	5,399
Inventories	8	433,961	524,385
Income tax receivables		28,906	26,262
Other current assets		83,034	99,313
Total current assets		2,255,827	2,677,024
Non-current assets			
Property, plant and equipment	9, 30	1,134,074	1,237,540
Goodwill and intangible assets	10, 30	395,882	468,368
Trade receivables and other receivables	6	2,334	1,459
Investments accounted for by the equity method	11	21,337	23,987
Other financial assets	7	3,734,978	3,338,505
Net defined benefit assets	17	37,408	27,887
Deferred tax assets	25	39,908	37,992
Other non-current assets		5,368	8,421
Total non-current assets		5,371,292	5,144,161
Total assets		7,627,120	7,821,185

The accompanying notes are an integral part of these financial statements.

2.5.5 Return on Equity (After Tax)

By influencing the global economy, all of the companies were dropping in 2023, compared to 2022. However, TMC has the greatest investment turnover in selected companies. Instead of Honda and Mazda, TMC made the most revenue at other financial assets (Appendix 1.0).

Figure 10.0: Return on Equity (After Tax) (%) of Toyota Motor Corp, Honda Motor Co Ltd, and Mazda Motor Corp from 2021 to 2023



Contributed by the writer

Source: Toyota Motor Corporation, 2021, 2022, 2023a., Honda Motor Co., 2021, 2022, 2023., and Mazda, 2021, 2022, 2023.

Appendix 1.0: TMC Consolidated Financial Statements 2023

[Consolidated Financial Statements and Other]

I. [Consolidated Financial Statements]

[Consolidated Statement of Financial Position]

(Millions of yen)			
	Notes	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)
Assets			
Current assets			
Cash and cash equivalents	5	247,085	202,731
Time deposits with deposit terms of over three months		328,674	420,173
Trade receivables and other receivables	6	1,121,491	1,398,757
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Inventories	8	433,961	524,385
Income tax receivables		28,906	26,262
Other current assets		83,034	99,313
Total current assets		2,255,827	2,677,024
Non-current assets			
Property, plant and equipment	9, 30	1,134,074	1,237,540
Goodwill and intangible assets	10, 30	395,882	468,368
Trade receivables and other receivables	6	2,334	1,459
Investments accounted for by the equity method	11	21,337	23,987
Other financial assets	7	3,734,978	3,338,505
Net defined benefit assets	17	37,408	27,887
Deferred tax assets	25	39,908	37,992
Other non-current assets		5,368	8,421
Total non-current assets		5,371,292	5,144,161
Total assets		7,627,120	7,821,185

The accompanying notes are an integral part of these financial statements.

2.5.6 Return on Assets (After Tax)

TMC's turn on assets were growing rapidly in 2023, from 3.45% to 6.02%. The average ratio was 4.62% from 2021 to 2023, which is also higher than Honda and Mazda.

Table 7.1: Profitability of Toyota, Honda, and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Total Assets Turnover (Times)	0.326	0.355	0.432	0.631	1.071
Equity Multiplier (EM)	0.511	0.527	0.503	0.448	0.433
Return on Equity (After Tax) (%) ^{*1}	11.48	8.98	15.81	7.50	10.05
Return on Assets (After tax) (%) ^{*1}	4.39	3.45	6.02	3.28	4.42

Note1: Trading View 2024a, 2024b, 2024c

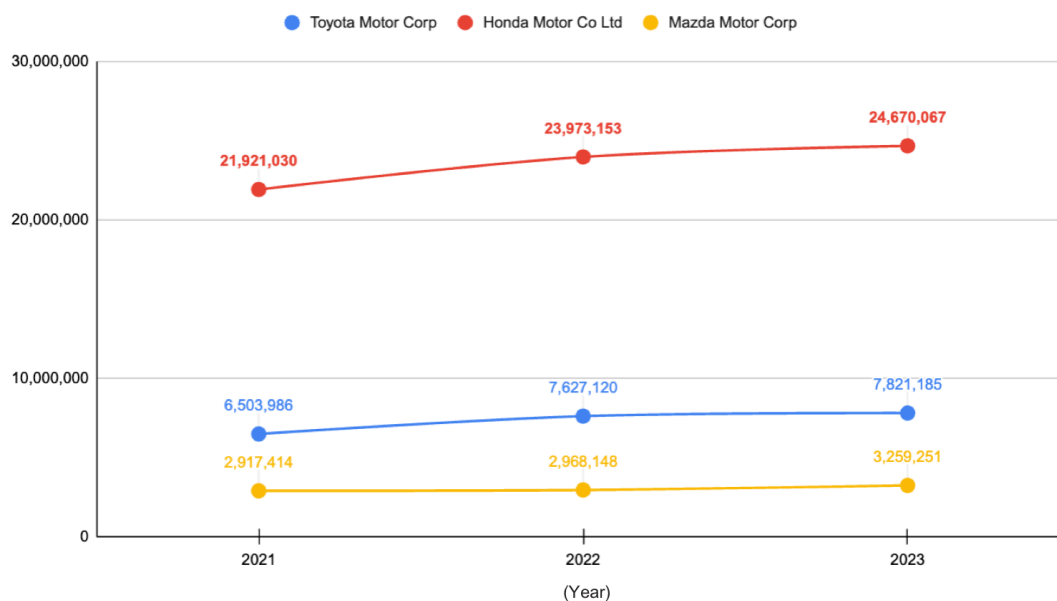
2.6 Growth Ability

Retained yield means the percent of resources (mainly is cash) will be allocated in next year, this decision is totally based on the management (Corelli, 2023). Table 8.0 shows that Honda had the highest number of retained yields.

Table 8.0: Growth Ability					
Year	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
	2021	2022	2023	3 Years Average from 2021 to 2023	
Retained Yield (Times)	9.685	8.172	8.317	13.084	-1.761
Self-sustainable Growth Ratio (%)	41.227%	37.660%	41.994%	90.095%	40.544%

Compared to TMC, Honda was the most aggressive decision, depending on the highest percentage of self-sustainable growth ratio (Baid, 2020), and TMC had the common management decision with Madaz. Figure 11.0, the total asset of TMC increased 2.48% in 2022 to 2023, which shows the total assets did not impact the ability to grow sustainably using TMC's internal resources.

Figure 11.0: Total Asset of Toyota Motor Corp, Honda Motor Co Ltd, and Mazda Motor Corp from 2021 to 2023 (Million in JPY)



Contributed by the writer

Source: Toyota Motor Corporation, 2021, 2022, 2023a ., Honda Motor Co., 2021, 2022, 2023., and Mazda, 2021, 2022, 2023.

2.7 Stock Market Prospects Analysis

Table 9.0 : Stock Market Prospects Analysis of Toyota, Honda and Mazda

	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
Earning Per Share (Yen) ^{*1}	160.650	205.230	179.470	130.653	101.980
Price-to-earnings ratio (Times)	10.730	10.830	10.480	8.900	-1.843
Dividend Yield ^{*2}	2.34	3.19	1.98	3.49	3.00

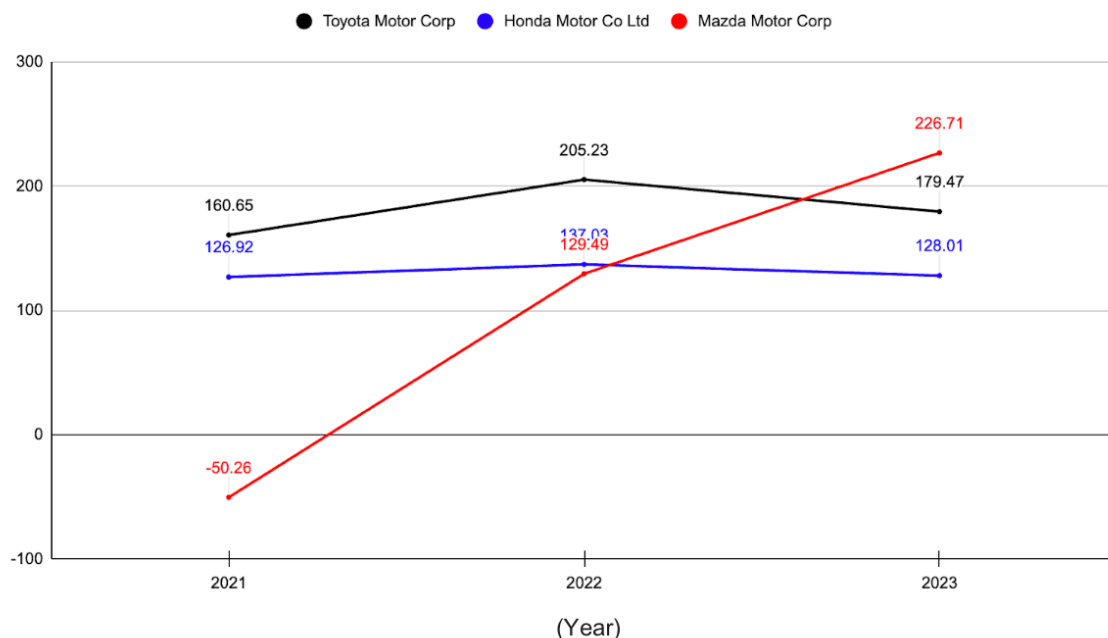
Note1: Wisesheets 2024a, 2024b, 2024c

Note 2: PricingTradingView 2024a, 2024b, 2024c

Except Mazda, the earnings per share dropped down in 2023, applied to TMC and Honda, Mazda was located at the negative position in 2021 (Figure 12.0). According to the lowest dividend yield, the price to earning ratio was overestimated for TMC; in addition to the stock value, TMC should have lower value to Honda and Mazda, based on the lowest dividend yield.

TMC promised to allocate dividends based on a consolidated dividend payout ratio of around 30% (Toyota Motor Corporation, 2023a); which is a high percentage of returning profits to shareholders (Bragg, 2020).

Figure 12.0: Earning Per Share (Yen) of Toyota Motor Corp, Honda Motor Co Ltd, and Mazda Motor Corp from 2021 to 2023



Contributed by the writer

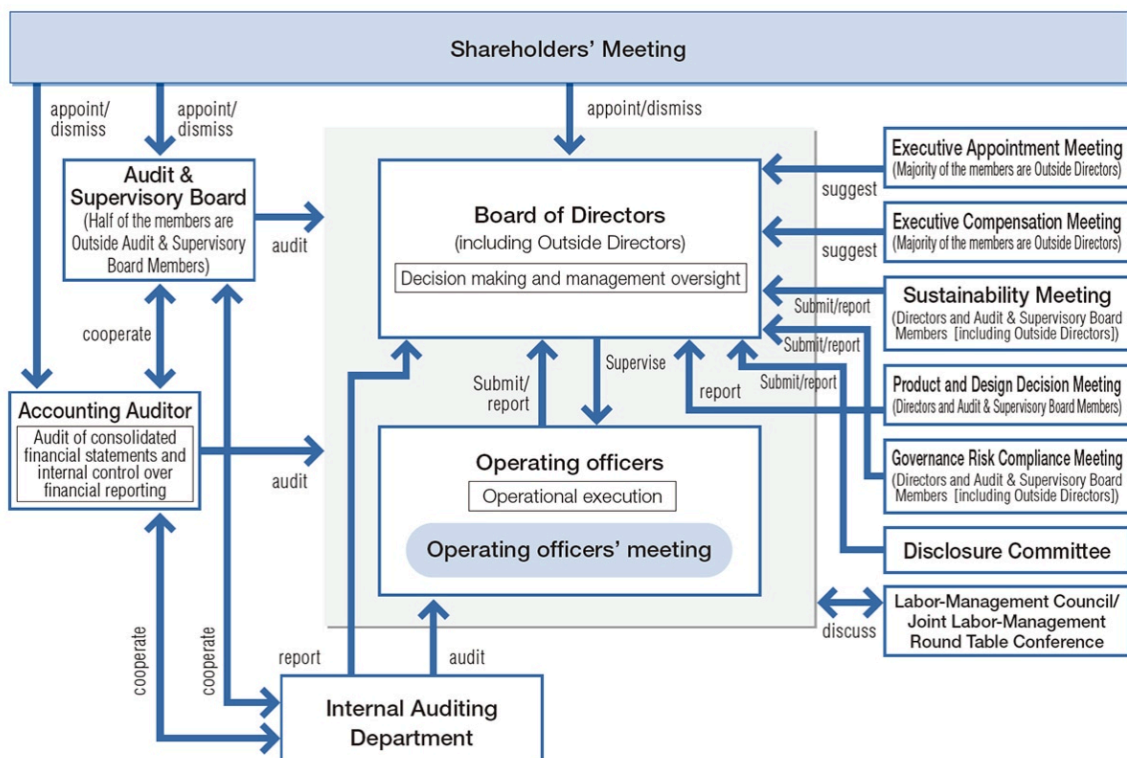
Source: Toyota Motor Corporation, 2021, 2022, 2023a ., Honda Motor Co., 2021, 2022, 2023., and Mazda, 2021, 2022, 2023.

3. TMC's Corporate Governance Assessment

As a multinational corporation and listed company, it is necessary to build positive relationships with all stakeholders, including investors, customers, business partners, staff, and local communities; it is a must to provide satisfied products to the markers (Toyota Motor Corporation, 2024f).

Aiming to establish a strong corporate governance, TMC has recruited outside members of the board of directors and outside audit & supervisory board members to join it (Toyota Motor Corporation, 2024f). Figure 13.0 displays the structure of the corporate governance system for TMC (Toyota Motor Corporation, 2024f), it is a complex construct of corporate governance organization, it acts an important role in accountability, transparency, ethics behavior, long term sustainability for TMC; the crucial role is provide the success and value to the stakeholders.

Figure 13.0: Corporate Governance Organizational Diagram



Source: Toyota Motor Corporation, 2024f

3.1 Connected Transaction Through the Minority Shareholders Interest

The capital relations of Toyota Industries and TMC are closed, TMC also has the voting right of Toyota Industries, the voting right maintained 24.7% in 2022 and 2023 (Toyota Motor Corporation, 2021, 2022b, 2023a).

Table 10.0: Toyota Industries owns Toyota Motor Corp Common Stock

	Year		
	2021	2022	2023
Number of Shares of Common Stock (in thousands)	238,466	1,192,330	1,192,331

3.2 Monitor Board of Direct Failure

TMC, as the largest automobile maker, apologized for providing fake and manipulated safety tests for its vehicles (Liang, 2024). It exposed the weakness of TMC's governance and broke a relationship with the customer at brand trust (Cuomo and Foroudi, 2024).

After the scandal widened, parts of TMC's shipments were suspended exporting, and shut down related production of the subsidiary (Aitken, 2023). Moreover, TMS will have penalties from related regulations. In the annual report 2023, there is a new item 'other domestic certification-related loss' as JPY 11,098 million, 29.4% of other expenses (Toyota Motor Corporation, 2023a).

3.3 Credit Risk

TMC has the health credit risk with a positive index of cash flow ratio, and the low percentage of bankruptcy (Chien, Chen, and Chang 2023). The current ratio was increasing each year and maintained over 1.5 ratio, it proves the global situation does not influence TMC much, it still has the ability to pay short-term debt (Tamplin, 2022).

Table 12.0. : Coporate Governance of Toyota, Honda and Mazda					
	Toyota Motor Corp	Toyota Motor Corp	Toyota Motor Corp	Honda Motor Co Ltd	Mazda Motor Corp
Year	2021	2022	2023	3 Years Average from 2021 to 2023	
ROA (after tax) (%)	4.39	3.45	6.02	3.28	4.42
ROE (after tax) (%)	11.48	8.98	15.81	7.50	10.05

Although TMC's corporate bonds and loans increased JPY 308,624M (18.16%) from 2022 to 2023 (Toyota Motor Corporation, 2023a), Moody's Invest Services (Moody's) stated A grade to TMC in 2023 and 2024 (Toyota Motor Corporation, 2024d). Moody's is one of the leading credit agencies, which plays an important role in financial markets (Cash, 2024).

3.4 Recommendation

This recommendation is focusing on the vehicle testing scandal, not limited to financial loss, and also destroyed the reputation of TMC's corporate governance system. No doubt, the system should have changes to rebuild the trust of shareholders. Without the apology announced, TMC should give the penalty and punishment to the related people and departments publicly.

To rebuild the positive brand image, the related automobile test can be assigned to a third party professional organization, like Insurance Institute for Highway Safety (Klyatis, 2020).

4. Investment Project Introduction

The investment project is to establish a machine loan company in India, mainly targeted in the materials handling section, India is part of the G20 economies, and one of the fastest growing countries (Vuppalapati, 2022). The developing economy has a lot of public infrastructure and industrial development, such as rail systems, airports, harbors, and power facilities. It shows the demand of the materials handling market.

According to Knowledge Sourcing Intelligence (2024), India's MH market is valued at JPY 593,266.95 million in 2021, and it will reach JPY 950,277.15 million in 2028, with a GAGR of 6.97%.

Apart from the traditional material handling system, the consumers are also looking for high technology products, such as automated guided vehicles and robots. According to Mordor Intelligence (2024), the estimated value of automated materials will reach JPY 2,568.972 million in 2024, and it will grow to JPY 4,648.616 million by 2029, the CAGR is 12.70%. This trend is created by COVID-19 with the lockdown policy, and the demand of technology as digital transformation.

Due to the demands of the materials handling market, the price competition is intensified. Although TMC provides premium products that excel in technology, quality, and cost, setting them apart from competitors (Toyota Motor Corporation, 2023a), it may not be suitable for most of the economic growth countries, they would like to reserve cash flow for other expenses or development.

This investment plan assists TMC to maintain the market share in the materials handling market, and increase the profitability in the materials handling market by offering machinery loan service to TMC's product.

4.1 Investment Description

Table 13.0 shows the basic information of a FIVE years investment project (from 2025 to 2029), which the net gain will be reached **70.8%**, and the first year is part of the preparation period, which will operate in 2025 Q4.

Table 13.0: Project Items Basic Information

Project Name	Machinery Loan Company in India - Handling Equipment Loan Financial Company
Duration	5 Years (2025 to 2029)
Initial Cost (Million in JPY)	703.969
Expected Return (Million in JPY)	869.162
Sales Growth Rate	9.675%

The capital reserve is JPY 700.144 million, aimed to cover 5 years operating expenses (refer to Table 12.2), and the cash flow of loan service. In this stage, the initial cost suggested to allocate from the retained earnings from TMC, the amount is less than 0.004% of the total retained earnings (refer to Table 2.1).

Table 2.1: Financial Analysis for Toyota Motor Corp, Honda, and Mazda (between 31-Mar-2021 to 31-Mar-2023)

Name of Company	Year	Net Current Assets (Million in JPY/ YEN)	Total Assets (Million in JPY/ YEN)	Retained Earnings (Million in JPY/ YEN)	Earnings before interest and taxes (EBIT) (Million in JPY/ YEN)
Toyota Motor Corp	2021	759,842	6,503,986	1,369,775	184,011
	2022	883,106	7,627,120	1,514,657	246,123
	2023	1,159,912	7,821,185	1,652,648	262,967
Honda Motor Co Ltd	2021	1,863,634	21,921,030	914,053	2,202
	2022	2,837,026	23,973,153	1,070,190	112,399
	2023	2,926,224	24,670,067	879,565	169,972
Mazda Motor Corp	2021	681,945	2,917,414	508,784	2,202
	2022	558,880	2,968,148	581,458	112,399
	2023	462,944	3,259,251	699,231	169,972

Contributor by the writer

4.2 Investment Criteria

This section will establish investment criteria for proposed machinery loan service company in India, with financial factors and non-financial factors.

4.2.1 Financial Factors

- High Level Items of Initial Cost

Table 12.2 shows the operation expenses, including employee cost, technology and software, other(s), cash; fortunately, it will share the office with TMC's headquarters.

Employee cost will be increased 5% per year; technology and software will have the one-off development cost in paperation, and reserve 10% of the maintenance and software enhancement, it will be increased 5% per year.

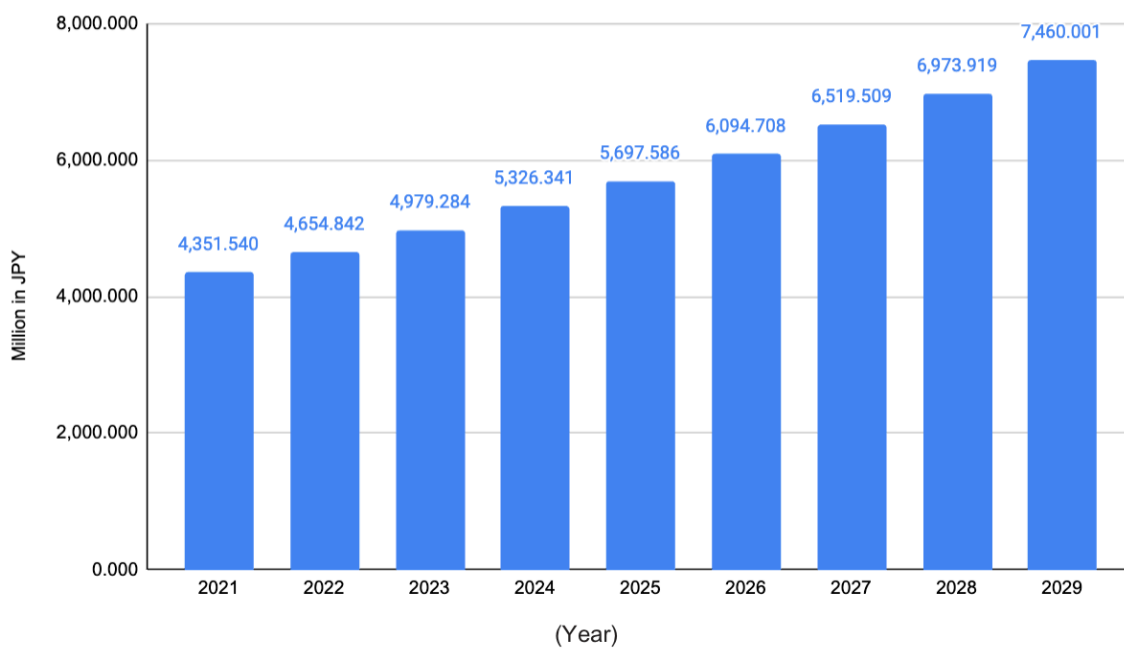
However, the largest segment of initial cost is the loan service in exchange for cash, which is JPY 696.152 million, as 99% of the total budget.

Table 13.1: High Level Items of Initial Cost					
Item(s)	Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
Employee Cost	2.100	2.205	2.426	2.668	2.935
Techology and Software	1.792	0.195	0.209	0.225	0.242
Other(s)	0.100	0.105	0.110	0.116	0.122
Loan Service in Exchange for Cash	114.028	125.431	137.974	151.771	166.948
Fixed Assets	3.825	--	--	--	--
Remarks: Details breakdown refer to Appendix 2.0					

- Five Year Calculation of Income

According to Knowledge Sourcing Intelligence (2024), the GAGR is 6.97% for HM marketing in India, the value of market was JPY 4,351.540 million in 2021. And the estimated sales value will reach JPY 5,697.586 million by 2025 (refer to Figure 14.0).

Figure 14.0: Estimated Sales for Materials Handling Section in India from 2021 to 2029



Contributed by the writer

Table 13.2 shows the 5 years total income of this project, and the amount of loan service is based on the estimated MH market value in India (refer to Figure 14.0); Except for the interest of loan service, the income also comes from the deposit interest of the initial cost.

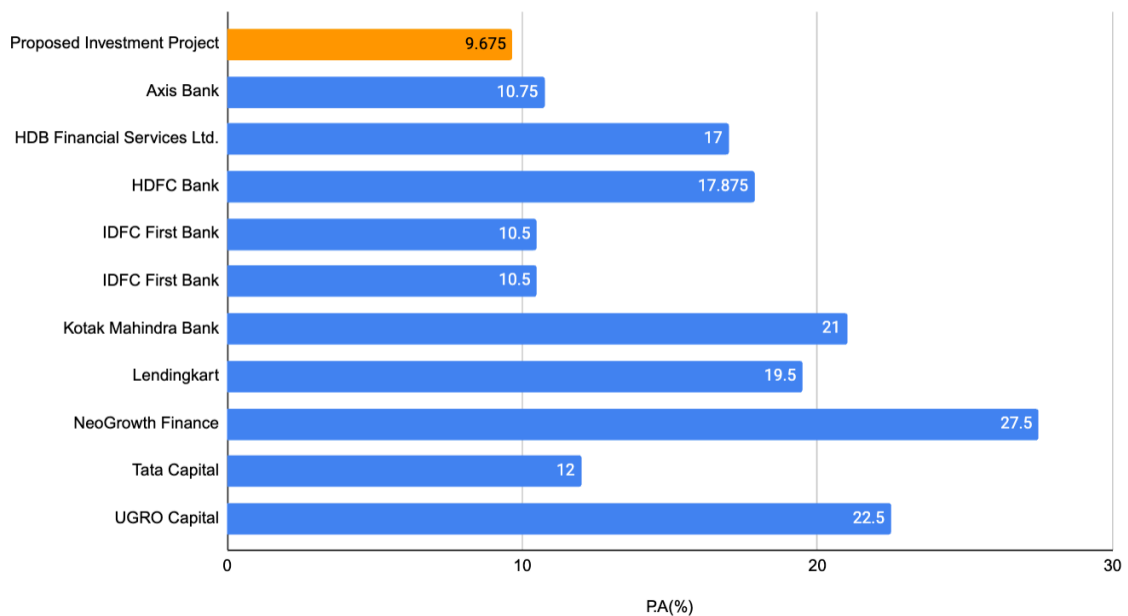
Table 13.2 Breakdown of 5 Years Income

	Note	Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
Estaimated Materials Hanlding Sales for TMC	2	40,768.297	43,825.919	47,112.863	50,646.328	54,444.803
Loan Service	1	114.028	125.431	137.974	151.771	166.948
Interest Income from Loan *9.675%	3	11.032	12.135	13.349	14.684	16.152
Interest Income from Deposit *7.5%	4, 5	229.730	297.947	372.054	508.590	548.375
Account Receiable for the Loan	6	102.996	113.295	124.625	137.087	150.796
Bad Debt	7	3.074	3.078	3.083	3.087	3.092
Deprecation	13	0	0.765	0.765	0.765	0.765
Total Revenue Before Tax		340.685	420.300	506.945	657.274	712.231
Note:						

1. First year as preparation year, the business will start at Q4
2. Assume have the same sales amount with Elcon, the vaule of sales was Lakhs 20,186.62 million in 2023 (Elecon, 2023).
3. Interest rate of banks or financial loan companies in India (Paisabazaar, 2024)
4. Deposit interest rate as 7.5% annual (India Bank, 2024)
5. Formula of deposit, total cash - current year budget of loan sales + previous interest income + account receivable
6. Formula of acocunt receiveable: current year account receiveable - bad debt
7. Bad debt rate is 2%, and estimated to increase 2% annually (Natti, 2024)
- 13: Net Present Value: Use the formula of excel with NPV function, NPV(discount rate, 1st year cash flow, 2nd year cash flow ... 5th year cash flow)

Compared with local financial services which provide machinery loan service, the proposed interest rate is 9.675% for a year (Figure 15.0). The value is based on the cheapest rate from Axis Bank, and marked with 10% off; aim to boost the sales. We assume the interest rate will be maintained at the same interest rate as 9.675% for 5 years.

Figure 15.0: Machinery Loan for India Financial Services Versus TMC



Contributed by the writer
Source: Paisabazaar, 2024

- Computing Tax Cost

As a foreign company in India, the company needs to pay 40% of the corporate rate each year (HSBC, 2024). To be safe, this proposal will keep the highest foreign corporate rate, although the corporation tax will be decreased based on the business which is related to machinery business (HSBC, 2024). Table 12.4 shows the estimated tax cost for 5 years, and gets the net income of the captioned years.

Table 13.3: Computing Tax Cost

	Note	Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
Items (Million in JPY)	--	2025	2026	2027	2028	2029
Total Revenue Before Tax	--	340.685	420.300	506.945	657.274	712.231
Total Expenses	8	3.992	2.505	2.745	3.009	3.298
EBIT	--	336.693	417.794	504.200	654.265	708.933
Corporation Tax	9	134.677	167.118	201.680	261.706	283.573
Net Income	--	21.365	202.016	250.677	302.520	392.559
EBITDA	14	21.365	202.781	251.442	303.285	393.324

Note:

8. Total expenses means operation cost, as Employee Cost, Technology and Software, Other(s), refer to Table 12.2, and Appendix 2.0

9. 40% of Corporation tax rate for foreign companies in India, based on net income (HSBC, 2024)

14. EBITDA means EBIT + value of depreciation

The amount of corporation tax mainly occurs by the interest income from deposit, if TMC can reallocate the cash to this investment project annually, it can save over more than 90% of the corporate tax.

- Cash Flow Calculation

Cash flow calculation is a fundamental tool which helps management to analyze the financial (Wellington, 2023). The cash flow is increasing positive per year, it shows the overall financial health of this proposed investment project (Krause and Arora, 2020).

Table 13.4: Cash Flow Calculation

Item (Million in JPY)	Initial Cost	Note	Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
EBIT		10	336.693	417.794	504.200	654.265	708.933
Corporate Tax		--	134.677	167.118	201.680	261.706	283.573
Cash Flow	703.969		202.016	250.677	302.520	392.559	425.360

Note:

10: EBIT means operating revenue - operating expenses + amortization. In this investment project, amortization cost will be counted in expenses

- **Average Rate of Return (ARR)**

Table 12.6 mainly calculates the average rate of return which helps to get the profitability of this project by counting the average annual net income or return generated relatives (Magni, 2020).

Table 13.5: Average Rate of Return (ARR)

Item	Note	
Net Income for 5 years (Million in JPY)	--	1,169.136
Average Annual Net Income (Million in JPY)	--	233.827
Average Investment for 5 years (Million in JPY)	--	140.794
Average ARR %	11	3.551
Initial Cost (Million in JPY)	--	703.969
Note:		
11: Average ARR means (Average Annual Net Income / Average Investment)*100%		

- Net Present Value (NPV)

By using discount rate and net present value to help the management in assessing the profitability and viability of this machinery loan investment plan (Guerard Jr., Saxena and Gültekin, 2022).

Table 13.6: Net Present Value (NPV)

Item	Note	
Discount Rate	12	53%
Initial Cost (Million in JPY)	--	703.969
Cash Flow 1st Year	--	202.02
Cash Flow 2nd Year	--	250.68
Cash Flow 3rd Year	--	302.52
Cash Flow 4th Year	--	392.56
Cash Flow 5th Year	--	425.36
NPV (Million in JPY)	13	442.42
Note		
12: Discount Rate: Use the formula of excel with RATE function, RATE(number of years, cash flow per period, -initial investment, initial cost)		
13: Net Present Value: Use the formula of excel with NPV function, NPV(discount rate, 1st year cash flow, 2nd year cash flow ... 5th year cash flow)		

- Internal Rate of Return (IRR)

Table 13.7: Internal Rate of Return (IRR)

Item	Note	
Initial Cost (Million in JPY)	--	-703.969
Cash Flow 1st Year	--	202.016
Cash Flow 2nd Year	--	250.677
Cash Flow 3rd Year	--	302.520
Cash Flow 4th Year	--	392.559
Cash Flow 5th Year	--	425.360
Internal Rate of Return (IRR)		29%
Note		
14: Payback period means initial investment/ annual cash inflow		

- **Payback Period (Months) and Return on Investment (ROI) %**

The return on investment (ROI) is 62.891%, which means JPY 100 is expected to return JPY 62.891 in this 5 year period project. The payback period is less than 2 years and 7 months (Refer to Table 12.9).

Table 13.8: Payback Period and Return on Investment (ROI) (%)

Item	Note	
Year 0 (Miliion in JPY)	14	-703.969
Year 1 (Miliion in JPY)	--	202.016
Year 2 (Miliion in JPY)	--	250.677
Year 3 (Miliion in JPY)	--	302.520
Year 4 (Miliion in JPY)	--	392.559
Year 5 (Miliion in JPY)	--	425.360
Payback Period (Years)	15	2.066
Payback Period (Months)	16	24.796
Return on Investment (ROI) (%)	17	62.847
Note		
14: Initial Cost		
15: Payback period (years) means initial investment/ annual cash inflow		
16: Payback period (months) means payback period (years)*12		
17: Return on Investment means (net present value / initial cost)*100%		

Cash flow is important for running a business, the 5 year cash flow grows rapidly and health per year, from 7.71% to 22.94% (refer to Table 12.5).

The main element of this machinery loan project is the capital of loan cash flow, which reaches 99.43% of the total initial cost (refer to Table 13.0 and 13.4). Actually, the budget of the loan will be increased based on the demand of the load service. High amounts of loan service demands will create a higher number of high returns on investment.

- Fixed Assets Depreciation for 5 years

Table 13.9: Fixed Assets Depreciation for 5 years

Fixed Assets	Note	Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
Office Furniture(s)	18	3.523	2.818	2.114	1.409	0.705
Office Equipment (Computers, printer and scanner)	18	0.302	0.242	0.181	0.121	0.060
Note 18: Depreciation is using straight line method, initial cost / period year						

The assets are tangible assets which TMC covers and uses in its operation to generate revenue, which are not intended for sales.

4.2.2 Non-Financial Factors

India has a high market demand for the machinery loans, due to the high numbers of infrastructure development, and the loan service can help the companies to reserve cash flow, and spending on the workforce cost.

TMC is one of the largest handling materials provider and marker, building a financial company to provide loan service in growing counties, it also can increase the total sales of handling material section.

Except the lowest interest rate from loan service (refer to Figure 15.0), two elements are also important, namely, customer relationship and government governance. For the customer relationship, it is a challenge of a Japanese background company to establish financial business in India; fortunately, TMC has branches and subsidiaries to trade its vehicle and handling materials in India, and this proposal suggests employing locals to set-up and operate the business.

Government governance always is a challenge to all types and sizes of business, a lot of elements cannot be predicted and negotiated with the government. The automated materials handling requirement is the new trend, however, those machines will collect the data, and store it over the internet. It will bring further issues of cyber security and private data, which are one of the hot topics of the global governments.

4.3 Conclusion and Recommendation

After financial and non-financial analysis for a proposed investment plan for materials handling equipment loan company (machinery loan), it shows the several key elements of management to consider its success and sustainability.

India has the demand of material handling equipment, National Portal of India will spend JPY 4,369,000 million cumulatively at the public infrastructure in 2032 (The Economic Times, 2024). Besides those development projects, the private companies in India will develop a lot of properties, warehouse equipment, lifting equipment, automated guided vehicles, and so on.

Due to the high percentage of corporate tax for the foreign company, the tax scheme will be the challenge of TMC, however, establish a subsidiary company with local companies, or invest in a local financial company to develop a specific machinery loan product for TMC only.

During the project period, the management should monitor performance, ensure the business of the investment project can achieve the key performance indicators (KPIs), which can track the effectiveness of this investment plan, and also make decisions based on data-driven.

The material handling equipment business is one of the core foundations for TMC (Toyota Motor Corporation, 2023a), aim to maintain the competition from other lower cost competitors, also keep the positive growth of business result, providing a machinery loan service in economic countries is a win win solution. In case, TMC wants to maintain existing cash and cash equivalents or allocate more resources in this investment project , the initial cost can be allocated from corporate bonds and loans (Refer to Appendix 1.2).

Appendix 1.2: TMC Consolidated Financial Statements 2023

13. Corporate Bonds and Loans

Corporate bonds and loans consist of the following.

(Millions of yen)

	FY2022 (As of March 31, 2022)	FY2023 (As of March 31, 2023)	Average interest rate (%)	Repayment due
Short-term loans	117,066	110,132	4.40	—
Commercial paper	65,203	180,605	—	—
Long-term loans repaid within one year	118,456	132,842	1.26	—
Corporate bonds redeemed within one year	167,777	96,169	—	—
Long-term loans	645,484	882,176	1.85	April 2024 - August 2039
Corporate bonds	276,526	297,213	—	—
Total	1,390,515	1,699,139	—	—

(Note) The average interest rate reflects the weighted-average interest rate against the balance at the end of the fiscal year ended March 31, 2023. Rates for corporate bonds are indicated in the summary of issuance terms of corporate bonds.

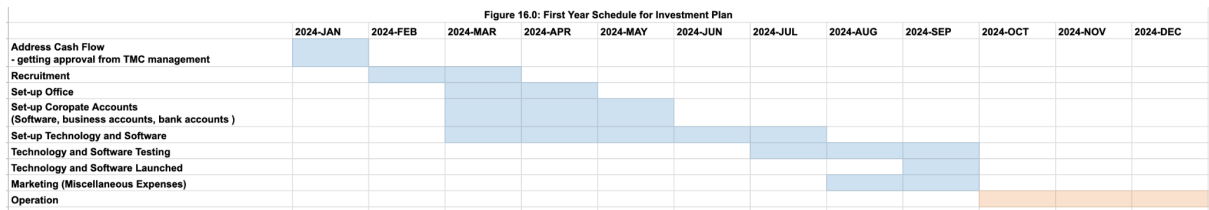
Corporate bonds and loans are financial liabilities measured at amortized cost.

Resouce: Toyota Motor Corporation, 2023a

In this situation, the initial cost can be allocated from existing cash flow in TMC; it should not be used with other methods of fund-raising strategy, such as capital acquisition, and financial planning. This is a new business to provide machinery loan service for TMC's materials handling platform, which will incur the interest expenses.

4.4 Investment Schedule at the First Year

Figure 16.0 shows the project schedule for the first year. As mentioned before, the machinery loan business in India will operate an open service to target customer in 2024 Q4 (October to December).



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6. Appendix

Appendix 2.0: Operation Cost Breakdown

[illegible]

Appendix 3.0: Sales Breakdown for 5 years

Note	Year	Estimated Sales Volume (Million in USD)				
		2025	2026	2027	2028	2029
1	Estimated Sales for Handling Materials Equipment *GAGR of 6.97%	6,070.82	5,678.97	6,070.82	6,489.70	6,937.49
		Estimated Sales Volume (Million in JPY)				
		Paperation Period 1st Year	2nd Year	3rd Year	4th Year	5th Year
Note	Year	2025	2026	2027	2028	2029
1	Estimated Items Sales for Handling Materials Equipment (GAGR of 6.97%) *Data	5,697.586	6,094.708	6,519.509	6,973.919	7,460.001
2	Materials Handling Sales	40,768.297	43,825.919	47,112.863	50,646.328	54,444.803
	Sales (Loan)					
	Estimated Loan Service *first year is 35.00% of esimated Sales, and increase 10.00% per year	114.028	125.431	137.974	151.771	166.948
	Income					
4	Interest Income from Loan *9.675%	11.032	12.135	13.349	14.684	16.152
5	Interest Income from Deposit *7.5%	229.730	297.947	372.054	508.590	548.375
	Account Receivable for the Loan	102.996	113.295	124.625	137.087	150.796
6	Bad Debt *2%, may increase 0.15% annual	3.074	3.078	3.083	3.087	3.092
	Total Revenue Before Tax	340.685	420.300	506.945	657.274	712.231
	Expense(s)					
	Staff Expense(s)	2.100	2.205	2.426	2.668	2.935
	Technology and Software	1.792	0.195	0.209	0.225	0.242
	Other(s)	0.100	0.105	0.110	0.116	0.122
	Total Expense(s)	3.992	2.505	2.745	3.009	3.298
	Fixed Assests					
	Office Furniture(s)	3.523	--	--	--	--
	Office Equipment (Computers, printer and scanner)	0.302	--	--	--	--
	Total Fixed Assets	3.825	--	--	--	--
7	Corporation Tax: 40%	134.677	167.118	201.680	261.706	283.573
	EBIT	336.693	417.794	504.200	654.265	708.933
	Net Income	202.016	250.677	302.520	392.559	425.360
	Total Net Income for 5 Year(s)	--	--	--	--	1,573.131
8	Capital Reserved for 5th Year	703.969				
Note1: Knowledge Sourcing Intelligence, 2024						
Note 2: Assume have the same sales amount with Elcon, the vaule of sales was Lakhs 20,186.62 million in 2023 (Elecon, 2023)						
Note 4: Refer to Figure 12.0						
Note 5: Capital Reserve - Current Year Budget, Deposit rate as 7.5% from India Bank, 2024						
Note 6: Natti, 2024						
Note 7: Capital Reserve = Estimated Loan Amont + Operation Cost						
Note 8: Corporation tax rate for foreign companies in India, based on net income (HSBC, 2024)						

Appendix 4.0: Formula

Items	Formula
Market Value*1(Millions of yen)	$(\text{Volume of Stock} * \text{Stock Value (YEN)}) / 1000000$
Net Current Assets	$\text{Total Current Assets} - \text{Current Liabilities}$
Z-Score	$1.2*A + 1.4*B + 3.3*C + 0.6*C + 0.999*E$
Fixed Asset to Long Term Liability Ratio	$\text{Total Fixed Assets} / \text{Total Long Term Liabilities}$
Current Liabilities to Net Asset Ratio	$(\text{Current Liabilities} / (\text{Total Assets} - \text{Total Liabilities}))$
Current Liabilities to Stock Ratio	$\text{Current Liabilities} / \text{Inventory}$
Current Ratio (%)	$\text{Current Assets} / \text{Current Liability}$
Quick Ratio (%)	$(\text{Current Assets} - \text{Inventory}) / \text{Current Liability}$
Stock Credit index	$(\text{Current Liability} - (\text{Current Asset} - \text{Inventory})) / \text{Inventory}$
Cash Ratio (%)	$\text{Cash} / \text{Current Liability}$
Total Debt Ratio (%)	$\text{Total Liability} / \text{Total Assets}$
Time Interest Cover Ratio	$\text{EBIT} / \text{Interest}$
Total Assets Turnover (Times)	$\text{Sales} / \text{Total Asstes}$
Average Collection Period (days)	$365 / (\text{Sales} / \text{Accounts Receivable})$
Day's Sales in Inventory (days)	$365 / (\text{Cost of Goods Sold} / \text{Inventory})$
Payment Period (days)	$365 / (\text{Cost of Goods Sold} / \text{Account Payable})$
Net Profit Growth	$(\text{Year Net Profit} - \text{Previous Year Net Profit}) / \text{Previous Year Net Profit}$
Gross Profit Margin (%)	$(\text{Sales} - \text{Cost of Goods Sold}) / \text{Sales}$
Net Profit Margin	$\text{Net Income after tax} / \text{Sales}$
Equity Multiplier (EM)	$(\text{Total Assets} - \text{Total Liabilities}) / \text{Total Assets}$
Retained Yield (times)	$\text{Retained Earning} / \text{Earning after tax}$
Self-sustainable Growth Ratio (%)	$\text{Retained Earning} / (\text{Total Assets} - \text{Total Liabilities})$
Cash Flow Ratio	$\text{Operating Cash Flow} / \text{Net Sales}$
Debt to EBITDA Ratio	$\text{Total Debt} / \text{EBITDA}$