Proceedings of the 7th International Conference on Economic Management and Green Development
DOI: 10.54254/2754-1169/43/20232167

Financial Analysis and Strategic Forecast of Toyota

Yibing Liu[1,a,*]

[1]*Business School, Macau University of Science and Technology, Macau, China*
a. 2009853db011018@student.must.edu.no
**corresponding author*

Abstract: One of the main forces boosting the nation's economic expansion is the automobile industry. It has developed a respectable market share in the world's four-wheeler businesses, which are essential to certain economic sectors. The one-year study period was the fiscal year of 2023, and the key information was gathered from the annual reports of the corporations-Toyota and its competitors. The paper analysis the Toyota Motor Corporation in four parts. Collected the evidence from the annual report, industry report and so in, the paper analysis the automobile corporation deeply. Firstly, the Introduction wraps up the company's history, development, business overview, and strategy. In accounting analysis, this paper analyzes some critical parts. I choose three critical items from the income statement and balance sheet to discuss the accounting records, Intangible incurred by R&D expenses, Vehicles and equipment on operating leases, and Revenue recognition. In the third part, this paper analyzes Toyota from four perspectives, liquidity, solvency, efficiency, and profitability with three ratios respectively. It argues for the current and future business, which gives the investor a deep understanding of Toyota and the automobile industry.

Keywords: accounting analysis, performance evaluation, automobile industry

1. Introduction

Toyota City, Aichi, Japan is the corporate headquarters of Japan automaker Toyota Motor Corporation. Toyota is one of the world's largest automakers, producing more than 10 million vehicles annually. Kiichiro Toyoda founded it, and it became a corporation on August 28, 1937. The automobile division of Toyota Industries Corporation (previously Toyoda Automatic Loom Works, Ltd.) was established in 1933. It and Toyota split in August 1937. The combination of the Toyota Motor Company and Toyota Motor Sales resulted in the creation of the modern Toyota Motor Corporation in 1982. As of March 31, 2023, Toyota had 569 consolidated subsidiaries (including structured entities), 168 associates, and joint ventures that were valued using the equity method [1].

Toyota is mainly a player in the automobile sector. Toyota also operates in the financial sector and others. Toyota sold 8,822,000 vehicles in FY2022 on a combined basis [2]. Toyota recorded sales revenues of ¥37,154.2 billion and a net income of ¥2,492.9 billion that was attributed to Toyota Motor Corporation in the fiscal year 2023 [1]. Toyota has three major businesses, vehicle operations, financial services operations, and all other operations. Toyota's automotive operations include designing, fabricating, manufacturing, and selling passenger cars, minivans, and commercial vehicles like trucks, as well as creating related parts and add-ons. The primary objective of Toyota's financial services division is to finance Toyota car leases and purchases for dealers and their clients. The retail

DOI: 10.54254/2754-1169/43/20232167

installment finance and leasing services are also provided by Toyota's financial services business, principally through the purchase of credit and leasing agreements made by Toyota dealers. In connection with its automotive operations, Toyota is working to connect every one of its cars, using the massive amounts of data gathered from those linked cars to transform businesses and establish new mobility services.

Toyota sells its cars in close to 200 different nations and areas. The four countries and areas Japan, North America, Europe, and Asia are Toyota's main markets. On March 4, 2022, Hino, a Toyota subsidiary that is part of a larger holding company, announced that it had identified past instances of misbehavior in connection with its requests for certification of its car engines' fuel efficiency and emissions for the Japanese market. Hino later obtained a report on the inquiry into this subject from a special investigation panel made up of outside experts. A corrective action order was issued to the Ministry of Land, Infrastructure, Transport, and Tourism ("MLIT") after it conducted an on-site examination of Hino. On October 7, 2022, Hino presented a report on recurrence prevention to MLIT. Hino made the decision to cut the compensation of directors, ask some former representative directors to voluntarily return a portion of their compensation, and have four directors or senior managing officers quit in order to clarify management responsibilities in this problem. In order to stop future wrongdoing, Hino also developed and proclaimed "Three Reforms," namely changes to management, business culture, and vehicle manufacture. In order to improve the world and the future, Hino is dedicated to tackling this problem head-on and pursuing its business mission: "We make a better world and future by helping people and goods get where they need to go."

Toyota implements both general strategy and intensive growth plans at the same time. The generic strategy serves as a representation of the business's overall strategy for competing in the world's automobile market [3]. In addition, Toyota's marketing mix (4P) and related marketing techniques are employed to assure the company's continuing success in markets all over the world. Toyota's general approach combines broad distinctiveness with cost leadership. Cutting operating costs while maintaining competitive selling prices strengthens the competitive advantages of the company. To maintain the company's competitive advantage over other automakers like General Motors, Tesla, and Ford, broad differentiation necessitates developing differentiated business and product offers. Toyota is able to reach out to various types of markets thanks to the combination of these generic techniques.

2. Accounting Analysis

The fiscal year 2022 Toyota ended on March 31, 2022. There are three areas that need the use of higher-level judgments or large estimates: intangible costs associated with R&D, vehicles, and equipment on operating leases, and revenue recognition. As a result, in its 2022 Annual Report, Toyota designated them as crucial accounting principles.

2.1. Intangible Incurred by R&D Expenses

Toyota was one of the top automobile manufacturers in 2022 with regard to R&D expenditures, the research and development expenses occurred in FY2022 was 86,192 millions of yen. The intellectual property that R&D produces as a key management resource to increase the value of the company [4].

Toyota has led the automotive industry for many years and continues to make significant research and development investments. Research and development expenses, according to Toyota, are comprised of research and development costs as well as research and development-related expenses that were recorded as intangible assets, less the costs associated with amortizing those assets. This measure has limits as a tool for analysis, so you shouldn't use it in place of a study of Toyota's R&D expenses as reported in accordance with IFRS or as a stand-alone consideration.

DOI: 10.54254/2754-1169/43/20232167

Toyota runs a global research and development company with the main objective of creating cars that satisfy the demand of customers on each continent. Toyota and Toyota Central Research & Development Laboratories, Inc., which collaborate closely with Daihatsu, Hino, Toyota Auto Body Co., Ltd., Toyota Motor East Japan, Inc., and numerous other Toyota group firms, are in charge of overseeing research and development activities in Japan. Toyota continues to operate an international network of design studios, technical hubs, and motorsports R&D facilities.

To hasten the development of AI technology, which has a lot of potential to enable new industrial technologies, Toyota established TRI in January 2016. In July 2017, TRI launched a venture capital fund with a $100 million initial commitment. The fund now makes investments in potential early-stage businesses in the four industries of robots, autonomous vehicles, data and cloud technologies, and artificial intelligence. The extra commitments from TRI were $100 million in May 2019 and $150 million in June 2021, respectively [5]. TRI established a $150 million fund to advance its objective of becoming carbon neutral.

2.2. Vehicles and Equipment on Operating Leases

The leases are written under property, plants and equipment (PPE) from income statement. PPE are valued at cost less accumulated depreciation and impairment losses. The majority of renewal and improvement costs are capitalized; smaller replacement, maintenance, and repair costs are billed as they are incurred to current operations. Except for land, which is exempt from depreciation, depreciation of property, plant, and equipment is computed using the straight-line technique over the expected useful life of the corresponding assets in accordance with general class, type of structure, and usage. Buildings have an estimated useful life of 2 to 65 years, whereas machinery and equipment have an estimated useful life of 2 to 20 years.

The leases take a small proportion of Toyota’s properties, under approximately 20%. Dealers begin operating leases on machinery and equipment, which a few consolidated subsidiaries then take over. In addition, some of the assets that these companies control outright are leased. Operating leases depreciate vehicles and other equipment to the anticipated residual value throughout the lease term, which is typically 2 to 5 years. The lease term is used to capitalize and amortize incremental direct costs that were incurred in connection with the acquisition of lease contracts. At the end of each fiscal year, the depreciation method, usable life, and residual values of property, plant, and equipment are reviewed and, if necessary, implemented prospectively.

Vehicles and equipment that are leased to third parties on an operational basis are created by dealers, and some consolidated subsidiaries also buy them. Additionally, some of the assets that these subsidiaries directly purchase are leased. In operational leases, the equipment and vehicles' anticipated residual value is depreciated over the lease term, which is typically 2 to 5 years. Capitalizing and amortizing additional direct costs that were incurred in conjunction with leasing contracts' purchases are done during the lease period. Toyota analyzes expected residual value to calculate the amount that is reasonable in relation to the anticipated losses on its owned portfolio, which is then represented in depreciation.

In the event that sales of off-lease vehicles fall short of covering the carrying value of the leased asset at lease termination, Toyota will be liable for the loss. To account for potential losses brought on by unguaranteed residual values on its owned portfolio, Toyota evaluates the estimated residual value at the end of each reporting period. The estimate is produced by taking into account the anticipated levels of loss and the anticipated rates of vehicle returns.

DOI: 10.54254/2754-1169/43/20232167

2.3. Revenue Recognition

Sales revenues for Toyota were $31,379.5 billion in the fiscal year 2023, an increase of $5,774.7 billion or 18.4% from the previous fiscal year. The rise was primarily caused by the 1,150.0 billion positive impact of higher car unit sales and changes in the sales mix as well as the 3,580.0 billion beneficial impact of favorable exchange rate adjustments. It revenue comprises of total revenues from sales of products which was 29,073.4 billion and financial services with 2,306.0 billion in FY2022. Toyota's business divisions cover all operations as well as the automobile, financial services sectors and other businesses. Before intersegment revenues are eliminated for FY2022, Toyota's automotive activities make up 89% of the company's overall revenues. Additionally, the sales figure is crucial since it affects key metrics for investors like operating income, income before income taxes, and net income. If the revenue cannot be recognized fairly and evaluated precisely, analysts will place an excessive value on Pearson and choose the incorrect investment. As a result, the assessment and acknowledgment of revenue requires considerable judgment.

Performance commitments are deemed fulfilled in the automotive industry when completed vehicles and parts are delivered to the locations specified with dealers. This happens when production-related supplies are delivered to manufacturing enterprises or loaded onto a ship. Because payment is made at or shortly after the time of sale, Toyota does not have any payment terms that are materially important. According to lease accounting, sales revenues for vehicles for which Toyota conditionally guarantees the minimum resale value are prorated from the date of sale to the first day on which the guarantee is exercised. The vehicles that form the basis of these transactions are classified as assets and are written down in accordance with Toyota's depreciation schedule.

3. Performance Evaluation

The global automobile market is fiercely competitive. The availability of new models and technological advancements, modifications to the social, political, and economic environment, as well as the cost that people pay to purchase or operate cars, all have an effect on the demand for automobiles. These variables could have a substantial impact on customer demand across a range of car models and regions. In 2022, the global economy saw consumer prices surge upward in both developed and developing nations as a result of rising energy and other commodity costs set against a backdrop of geopolitical unrest. There were indications of a fall in demand starting in August when central banks in many nations quickened the pace of monetary tightening due to worries about a recession in the global economy. Toyota Motor Corporation has a bunch of competitors such as Volkswagen Group, Hyundai Motor Group, General Motors Company, Ford Motor Company, and Nissan Motor Corporation. Table 1 compares the Market capitalization of 2022 Toyota and its similar companies.

Table 1: Market capitalization of 2022 Toyota and its competitors.

Company Name	2022 Market Cap
Toyota	201.633B
Volkswagen	70.308B
Hyundai	36.154B
GM	50.364B
Ford	54.971B
Nissan	15.407B

DOI: 10.54254/2754-1169/43/20232167

Toyota has been the most outstanding company in market capitalization, and the main competitors are Volkswagen Group with the second-largest market capitalization of 70.308 billion, and Ford Motor Company with 54.971 billion market capitalization [6, 7].

3.1. Liquidity

Liquidity ratio gauges a company's ability to manage cash flow and make debt payments through current ratio, quick ratio and cash ratio. All in all, Toyota has relied on cash generated from operations to pay for all of its cash needs, including those related to capital investments and its R&D projects.

Table 2 shows the three metrics to measure the liquidity of the company and the size of the data is proportional to the liquidity. Toyota's liquidity as reflected in its current ratio and quick ratio is not very impressive. This may be the case given that Toyota uses its available cash and cash equivalent to cover all of its cash needs, including those for capital purchases and its R&D activities. In FY2022, Toyota produced $7,516,966,000,000 in cash. However, by removing the influence of inventories and other non-current assets, Toyota outperformed in its cash ratio.

In 2022, net cash generated by operating activities was 2,955.0 billion, down from 3,722.6 billion in 2022. A 381.6 billion dollar fall in net income was the primary factor in the decline [8]. Net cash spent in investing operations in fiscal 2023 increased by 1,021.3 billion to 1,598.8 billion from fiscal 2022. The main reason for the increase was a $1,762.7 billion decrease in withdrawals from time deposits from the previous fiscal year. Net cash used in financing activities for the fiscal year 2023 was $56.1 billion, a decrease of $2,410.3 billion from the net cash used in financing activities for the fiscal year 2022 of $2,466.5 billion. The primary cause of the increase in funding by long-term debt in fiscal 2023 was the $1,154.2 billion increase.

Table 2: Liquidity ratios of Toyota and its competitors.

	Current ratio	Quick ratio	Cash ratio
Toyota	1.10	0.93	0.31
Volkswagen	1.23	0.94	0.16
Ford	1.20	1.06	0.26

3.2. Solvency

Long-term debt ratios measure a company's ability to meet solvency commitments. Table 3 shows the solvency ratios of Toyota and its major competitors Volkswagen and Ford, including the long-term debt ratio, total debt ratio, and time-interest-earned ratio.

During fiscal 2023, Toyota's total debt climbed by 2,883.9 billion yen (10.9%). The loans and commercial paper that makeup Toyota's short-term debt have weighted average interest rates of 2.02% and 3.81%, respectively. During fiscal 2023, short-term borrowings rose by 485.3 billion, or 11.8%, to $4,590.1 billion. Toyota's long-term debt is mostly made up of medium-term notes, unsecured and secured loans, and loans with weighted average interest rates between 1.29% and 6.53% and maturity dates between 2023 and 2048. In fiscal 2023, the current portion of long-term debt rose by 621.7 billion dollars, or 8.8%, to reach $7,648.5 billion, while the non-current portion rose by 1,741.6 billion dollars, or 11.7%, to reach 16,685.3 billion. The rise in overall borrowings was primarily brought on by the rising need for capital brought on by an increase in the loan balance at financial subsidiaries.

DOI: 10.54254/2754-1169/43/20232167

Table 3: Solvency ratios of Toyota and its competitors.

	Long-term debt ratio	Total debt ratio	Time-interest-earned ratio
Toyota	0.37	0.93	0.31
Volkswagen	0.53	0.94	0.16
Ford	0.67	1.06	0.26

The long-term debt of Toyota in 2022 is lower than both of its two competitors which means that Toyota has a strong ability to meet long-term debt repayment. It is obvious that Toyota has a lower total debt ratio than its peers. Toyota is more conservative in debt financing. All in all, debt management is at low risk, and Toyota can cover the earning.

3.3. Efficiency

The total asset turnover rate reflects the operation capacity of a company. As Table 4 shows, The asset turnover ratio serves as a gauge of a company's asset use effectiveness. Toyota's asset turn for the most recent fiscal year ending in 2023 is lower than its competitor which may be affected by the epidemic and Russo-Ukrainian War, Toyota could not efficiently use the amount of asset to generate sales or revenue and the operation is inefficient.

A company's inventory turnover ratio shows how frequently its stock is sold and replaced over time [9]. The inventory turnover shows that Toyota invests less raw materials in the process than its competitors. Selling inventory reduces profit margins and increases asset turnover. From 2021 to 2022, there is a large increase in inventory, which also corresponds to a decrease in operating profit margin and an increase in total asset turnover. As the leading company in the automobile industry, Toyota has the highest profit margin compared to its two main rivals which means it has a high profit over peers this shows that under the impact of the epidemic environment, enterprises have gradually opened up a more suitable and advantageous strategic road for the company.

Table 4: Efficiency ratios of Toyota and its competitors.

	Asset turnover	Inventory turnover	Profit margin
Toyota	0.37	0.93	0.31
Volkswagen	0.53	0.94	0.16
Ford	0.67	1.06	0.26

3.4. Profitability

Toyota is a highly profitable company. As Table 5 shows, it is obvious that the increase of Toyota market value is the most and Toyota ranked the 48th world's most valuable company by the market capitalization [10]. In addition, Toyota has a higher ROA and ROE than its main competitors, and return on equity is more pleasant for its shareholders than its competitors. In other words, Toyota has efficiently managed its financial resources or assets in making a profit. The latest ROA is 0.04. it is obvious that the return on assets of Toyota is higher than its competitors. Toyota had achieved great success in improving its net income by using assets to finance. The reason why Ford has a negative ROE and ROA in FY2022 is that the company paid dividends or fail to manage the resources to generate income from assets and equity.

Table 5: Profitability ratios of Toyota and its competitors.

	Market value added	ROE	ROA
Toyota	201,902,735,787	0.09	0.04
Volkswagen	70,307,821,673	0.08	0.02
Ford	54,970,956,833	-0.05	-0.01

4. Conclusion

In conclusion, this study has delved into the analysis of Toyota Motor Corporation, a significant player in the global automobile industry. Through an examination of annual reports, industry reports, and other relevant sources, the paper has provided valuable insights into various aspects of the company. The Introduction section offered a comprehensive overview of Toyota's history, development, business landscape, and strategic direction. The accounting analysis section focused on key items extracted from the income statement and balance sheet, namely, intangible assets arising from research and development (R&D) expenses, vehicles and equipment on operating leases, and revenue recognition. By scrutinizing these areas, the paper shed light on the accounting practices and financial performance of Toyota, contributing to a deeper understanding of the company's financial standing.

Furthermore, the study conducted a thorough evaluation of Toyota from four perspectives: liquidity, solvency, efficiency, and profitability. By utilizing various ratios, the analysis provided valuable insights into the company's financial health and its ability to generate returns for investors. These findings help investors and stakeholders gain a comprehensive understanding of Toyota's current and future prospects in the dynamic automobile industry. With the technological innovations of electrification, intelligence, and diversification progressing, Toyota can take advantage of the opportunity to combine worksite-honed craftsman skills with intelligence to propose new methods of manufacturing and new “automation with human intelligence” processes.

References

[1] *TMC’s FY2023 Financial Results Press Briefing.*
[2] *Toyota Announces FY2022 Financial Results.*
[3] *Toyota’s generic Strategy & Intensive growth strategies. Panmore Institute. https://panmore.com/toyota-generic-strategy-intensive-growth-strategies, last accessed 2023/07/10.*
[4] *Toyota earns most R&D patents among automakers in Intellectual Property Owners Association rankings for 8th consecutive year. Toyota USA Newsroom. https://pressroom.toyota.com/toyota-earns-most-rd-patents-among-automakers-in-intellectual-property-owners-association-rankings-for-8th-consecutive-year/,last accessed 2023/07/10.*
[5] *Toyota Announces FY2021 Financial Results.*
[6] *Volkswagen 2022 Annual Report.*
[7] *Ford 2022 Annual Report.*
[8] *How Toyota Makes Money. https://www.investopedia.com/articles/markets/021416/how-toyota-makes-money-tm.asp, last accessed 2023/07/10.*
[9] *Inventory turnover. Corporate Finance Institute. https://corporatefinanceinstitute.com/resources/accounting/inventory-turnover/*
[10] *Toyota retains most valuable auto brand title; Tesla passes Honda, Ford and Nissan. Automotive News Europe. https://europe.autonews.com/automakers/toyota-retains-most-valuable-auto-brand-title-tesla-passes-honda-ford-and-nissan*