Term-End Staff Graded Assignment

Assignment Title: Analysis of Financial Management

Assignment Task:

Select a non-financial listed company. Search for this company's annual report using their website or other sources. The annual report of a listed company is a publicly available document and is generally accessible through the company's website.

Based on the analysis of the annual report of the selected company, provide responses to the following questions:

Company Profile

Name:

Tesla Inc.

Trading symbol:

TSLA

Stock exchange:

National Association of Securities Dealers Automated Quotations (NASDAQ)

No. shares of common stock outstanding:

3,133,470,045

Industry:

Consumer Discretionary

Sector:

Automobiles & Components

Country:

United States

Tesla, Inc. designs, develops, produces, leases, and distributes electric automobiles and energy generating and storage solutions in the United States, China, and globally. The business is divided into two divisions: Automotive and Energy Generation and Storage. The Automotive division sells electric automobiles and automotive regulatory credits. It offers sedans and SUVs via direct and used car sales, a network of Tesla Superchargers, in-app upgrades, and financing and leasing services. This segment is also involved in the provision of non-warranty after-sales vehicle services, the sale of used vehicles, retail merchandise, vehicle insurance, and the sale of products to third third-partyers; the provision of services for electric vehicles through company-owned service locations and Tesla mobile service technicians; and the provision of the vehicle limited vehicle ties and extended service plans. The Energy Generation and Storage segment designs manufacture installs, sells, and leases solar energy generation

and energy storage products and related services to residential, commercial, and industrial customers and utilities via its website, stores, and galleries, as well as a network of channel partners. This section also provides energy product customers with servicing and repairs, including under warranty, as well as solar consumers with a variety of financing alternatives. In February 2017, the firm formerly known as Tesla Motors, Inc. changed its name to Tesla, Inc. Tesla, Inc. was founded in 2003 and has its corporate headquarters in Austin, Texas.

Question 1 (3 + 7)

(a) Find out the last year's reported cash flow from operating activities (CFOA) for your chosen company. For the next six years, CFOA will grow at a constant growth rate of 15%. Calculate the CFOA for the next six years.

(b) Find out the present value of future five-year CFOAs assuming a discount rate of 10%.

Answer:

The reported cash flow from operating activities in 2021 amounted to $11 497 million and will grow to $26 593 by 2027 with total cashflows over the period amounting to $127 235

Tesla Inc.

Consolidated Cash Flow from Operating Activities

Discount rate									
10%	US$ in millions								
	0	**1**	**2**	**3**	**4**	**5**	**6**	**Total CFOA 15% growth per annum**	**NPV Total 5 years discounted @ 10%**
Year	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**for 6 years**	
Net cash provided by (used in) operating activities	$ 11 497	$ 13 222	$ 15 205	$ 17 485	$ 20 108	$ 23 125	$ 26 593	**$ 127 235**	
lue of cashflows		$ 12 020	$ 12 566	$ 13 137	$ 13 734	$ 14 359			**$ 65 815**

The present value of the future cash flows discounted at 10% per annum amounts to $65 815 for the 5 years

Question 2 (10)

Identify the major Capex projects done by the chosen company in the last three years and evaluate their success or failure by applying capital budgeting techniques.

Answer:

Capital expenditures are involved in a company's investment decisions. As a result, they are referred to as capital budgeting decisions. A capital budgeting decision entails the allocation of capital or the commitment of funds to long-term assets that will generate benefits (cash flows) in the future. Two critical components of investment decisions are (a) assessing the anticipated profitability of new investments and (b) determining a cut-off rate against which the projected return on new investments can be assessed. Future investment gains are difficult to quantify and cannot be forecast precisely. Investment risk comes because of uncertain returns. As a result, investment offers should be examined in terms of both expected return and risk.

Tesla Inc.

Consolidated Cash Flow Statement

	1	2	3	4
US$ in millions	**2021**	**2020**	**2019**	**2018**
Purchases of property and equipment excluding finance leases, net of sales	6482	3157	1327	2101
Purchases of solar energy systems, net of sales	32	75	105	219
Annual Capital Expenditures (in millions $)	6 514,00	3 232,00	1 432,00	2 320,00
Y / Y Annual Capital Expenditures Change	102%	126%	-38%	-43%

Tesla's capital expenditures have resulted in the company producing new products in the Model S and Model X, Megapack, and Solar Roof, ramping manufacturing facilities on three continents and piloting the development and manufacture of new battery cell technologies. The pace of their capital spending varied depending on the overall project priority, the rate at which the company met milestones, production adjustments to and among their various products, increased capital efficiencies, and the addition of new employees. The pipeline of stated future projects in development, and other infrastructure expansions, is estimated that capital expenditures should reach $5 to $7 billion in 2022 and each of the next two fiscal years.

Historically Tesla is actively investing in strategic growth via acquisitions and internal investment in new initiatives. First, Tesla paid $2.6 billion in 2016 to acquire SolarCity. Additionally, the corporation is increasing car production. Tesla currently maintains "Gigafactories" in California, Berlin, Austin, and Shanghai, with further facilities planned to meet its soaring demand.

ROIC% indicates how successfully a company generates cash flow relative to the amount of capital invested in the business. Additionally known as ROC%. For the quarter that ended in June 2022, Tesla's annualised return on invested capital (ROIC%) was 22.43%.

The WACC% for Tesla as of today (10-10-2022) is 16.58 percent. Tesla has a ROIC% of 24.61%. (calculated using TTM income statement data). Tesla earns greater returns on investment than it costs to raise the capital required for those investments. It is generating a surplus return. If a company intends to continue generating positive excess returns on new investments in the future, its value will rise as its rate of expansion accelerates.

As a result, increased capital spending is attributable to increasing cash flow creation. Furthermore, Tesla is benefiting from improved capital management. Tesla's increase in capital expenditures confirms that the company is performing substantially better despite a difficult business climate marked by inflationary pressures and supply chain difficulties.

As a result, the firm's investment projects must create at least enough net cash flow to cover investors' needed rates of return (shareholders and debt holders). In reality, investment projects should generate greater cash flows than are required to meet investors’ expectations to create a net addition to the wealth of ordinary shareholders.

Question 3 (10 + 5 + 5)

Describe the capital structure of the company and find out the following:

Capital Structure

A company's capital structure refers to its debt-equity mix. The capital structure determination is a crucial financial decision since it influences the return and risk of shareholders and, subsequently, the market value of shares.

Since the capital structure is the combination of debt, preferred stock, and common equity used to finance a company's operations and acquire assets seeking the optimal financing mix or capital structure, the capital structure of a company is then deemed optimal when the market value of its shares is maximised. In the absence of debt, shareholder and business returns are identical. The use of debt impacts shareholders' return and risk; it may enhance the return on equity capital, but it also raises risk.

Companies looking to expand their activities beyond a specific growth stage frequently find it necessary to raise funding from outside sources. A firm can finance operations, day-to-day working capital needs, capital expenditures, business acquisitions, and more with the proceeds from debt and stock issuances. Debt or equity can be used to raise funds from the outside by a company.

Automakers need huge amounts of capital to manufacture vehicles. Tesla has expanded with debt over the years. Tesla's liabilities were $30.5 billion on Dec. 31, 2021. The company's debt increased by 7% between 2020 and 2021.

Tesla's retained earnings were $331 million by 2021. Tesla's Debt/Equit ratio in 2018 was 3.71 and had $23 billion in debt and $6 billion in equity. Fast forward to 2021, the company's capital structure has changed. At the end of the year, the company's debt-to-equity ratio was 1.01.

Tesla's Q4 2021 EPS was $2.05, a record. Its 12-month EPS was $4.90, a record. In 2021, Tesla beat quarterly EPS expectations. Profits are up across the company. Q4 2021 sales of $17.7 billion were up 65% from Q4 2020. The profit margin is over 400% from a year earlier. Despite having less cash, the corporation made $2.61 billion in operating profits in Q4 2021. After great financial results in 2021, Tesla's financial situation is far stronger than it was only a few years ago. In 2021, Tesla was profitable, exceeded quarterly EPS projections, and had a significantly improved debt-to-equity ratio.

Tesla Inc is now considered the top stock in terms of market capitalisation among firms in its industry. The market capitalisation of the Automotive Manufacturers industry is now projected to be approximately $1.42 trillion. Tesla's market value is approximately $266.38 billion, representing approximately 19% of the Auto Manufacturers industry.

(a) Cost of equity

$$\text{Cost of Equity} = \text{Risk Free Rate} + (\beta \times \text{Equity Risk Premium})$$

Using the CAPM model

$$K_e = r_f + \beta * (R_m - R_f)$$

Cost of Equity Calculation	Dec 31, 2021
The risk-free rate of return	3%
Beta (5Y Monthly)	2,19
Historical Market return	10%
Market risk premium	7%
Using CAPM Model – The cost of equity is	18%

(b) Cost of debt

$$\text{Pre-Tax Cost of Debt} = \frac{\text{Annual Interest Expense}}{\text{Total Debt}}$$

$$\text{After-Tax Cost of Debt} = \text{Pre-Tax Cost of Debt} \times (1 - \text{Tax Rate})$$

US$ in millions	Dec 31, 2021
Interest Expense	371
Cost of debt	5,43%
Current portion of debt and finance leases	1 589
Debt and finance leases, net of the current portion	5 245
Total interest-bearing debt	6 834
Cost of debt (pre-tax)	5,43%
The tax rate in the US	21%
The after-tax cost of debt	4,29%

The cost consideration has a considerable impact on a firm's debt policy. Debt helps you save taxes (interest tax shield) because interest on debt is a tax-deductible expense. The interest tax shield lowers the overall cost of capital, but debt raises the firm's financial risk. The firm strives to maximise business

value by minimising the overall cost of capital while determining the financing policy, that is, the percentage of debt and equity in the capital structure.

(c) Weighted average cost of capital (WACC)

$$WACC = k_d(1-t) * \frac{Debt}{Debt + Equity} + k_e * \frac{Equity}{Debt + Equity}$$

WACC Calculation - US$ in millions	Dec 31, 2021
Proportion of interest-bearing Debt	18%
Proportion of Equity	82%
Total Equity	31 015
Total Debt	6 834
The weighted average cost of capital	15,79%

The firm's cost of capital is the rate of return demanded by all investors for supplying capital for funding the firm's investment projects through the purchase of various securities. It should be noted that the rate of return demanded by all investors will be an overall rate of return—a weighted rate of return. As a result, the firm's cost of capital is the "average" of the opportunity costs (or needed rates of return) of multiple securities with claims on the firm's assets. This rate represents the operational (business) risk and the financial risk associated with loan capital. Given a firm's capital budgeting choice, it must determine how capital projects will be funded. Every time the company takes an investment decision, it makes a financial decision.

Question 4 (20)

Analyze the operating and financial leverage of the company and compare it with its main competitor in the same industry.

Operating leverage influences a company's operating profit (EBIT), whereas financial leverage influences profit after tax or earnings per share. The combined effect of two leverages might be extremely considerable for ordinary shareholders' earnings.

Operating Leverage

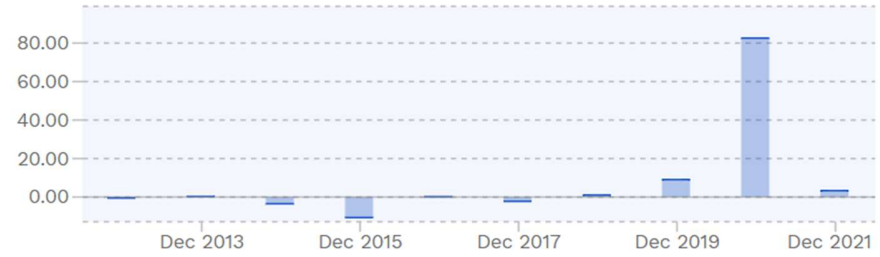
The percentage change in earnings before interest and taxes relative to a given percentage change in sales is described as the degree of operational leverage (DOL). Thus:

$$DOL = \frac{\%\text{Change in EBIT}}{\%\text{Change in Sales}}$$

The greater the percentage of fixed and variable expenses, the greater the degree of operating leverage. It should be noted that operating leverage has an impact on EBIT. When sales are increasing, high operating leverage leads to a faster increase in EBIT. In difficult times, when sales are decline operating leverage becomes an annoyance; EBIT falls faster than sales. With fluctuating sales, operating leverage creates significant swings in EBIT. Operating expenses may also vary due to variations in input prices, contributing to the unpredictability of EBIT.

$$DOL = \frac{\Delta EBIT / EBIT}{\Delta Sales / Sales}$$

The following section summarizes insights on Tesla, Inc.'s Degree of Operating Leverage (DOL):



The operational leverage (dol) for the past twelve months at Tesla is 3.78. The average operational leverage (dol) for Tesla's fiscal years from December 2017 to 2021 was 18.75. The median degree of operational leverage (dol) for Tesla's fiscal years from December 2017 to 2021 was 3.32. In December 2020, Tesla's degree of operational leverage (dol) reached its highest point during the past five years, reaching 82.61. In December 2017, Tesla's operational leverage (dol) reached a five-year low of -2.25. In 2017 (-2.25, -1,756.3%) and 2021 (3.32, -96.0%), Tesla's operational leverage (dol) fell, whereas it climbed in 2018 (1.02, -145.6%), 2019 (9.06, +784.9%), and 2020 (82.61, +811.6%).

The following businesses are comparable to Tesla, Inc. because they operate in a similar industry or sector. In addition to size, growth, and numerous financial parameters, are used as factors to narrow down the list.

Tesla Degree of Operating Leverage (DOL) Benchmarks

Name	Ticker	Degree of Operating Leverage (DOL)
Amazon.com, Inc.	NASDAQGS:AMZN	-5.03
Envirotech Vehicles, Inc.	NASDAQCM:EVTV	-0.91
Virgin Galactic Holdings, Inc.	NYSE:SPCE	-0.04
Nikola Corporation	NASDAQGS:NKLA	0.00
Workhorse Group Inc.	NASDAQCM:WKHS	0.97
Apple Inc.	NASDAQGS:AAPL	1.58
Consumer Discretionary	SECTOR:DSCY.US	2.51
Tesla, Inc.	NASDAQGS:TSLA	3.78
Rivian Automotive, Inc.	NASDAQGS:RIVN	NA
General Motors Company	NYSE:GM	5.61
Phoenix Motor Inc.	NASDAQCM:PEV	NA
Lordstown Motors Corp.	NASDAQGS:RIDE	NA

Financial Leverage

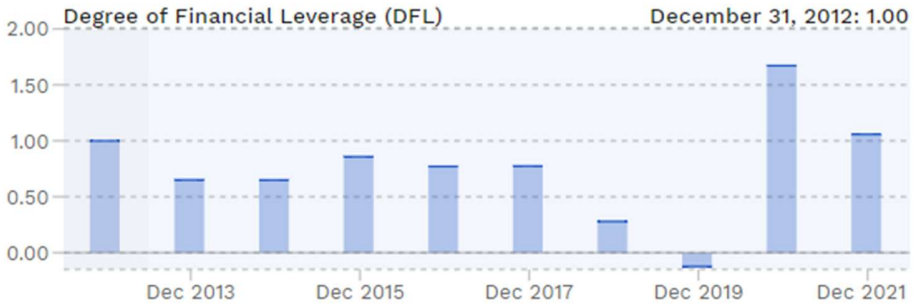
With increasing financial leverage, the unpredictability of EPS (and ROE) increases for a given degree of EBIT variability. Financial risk is the variation in EPS caused by the usage of financial leverage. Firms exposed to the same level of operating risk can differ in terms of financial risk if they finance their assets differently. A company that is entirely funded by equity has no financial risk. However, when debt is employed, the corporation adds financial risk. Financial risk is thus an avoidable risk if the organisation decides not to use debt in its capital structure.

Financial leverage has an impact on earnings per share. When the economy is doing well, and the firm's EBIT is rising, its EPS rises quicker with greater debt in the capital structure. The percentage change in EPS due to a given percentage change in EBIT is defined as the degree of financial leverage (DFL):

$$\mathrm{DFL} = \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

$$\mathrm{DFL} = \frac{\Delta\ \mathrm{EPS}/\mathrm{EPS}}{\Delta\ \mathrm{EBIT}/\mathrm{EBIT}}$$

The following section summarizes insights on Tesla, Inc.'s Degree of Financial Leverage (DFL):



The most recent 12-month degree of financial leverage (DFL) for Tesla is 1.03. Tesla's degree of financial leverage (DFL) averaged 0.73 from the fiscal years ending in December 2017 to 2021. From fiscal years ending in December 2017 through 2021, Tesla's median degree of financial leverage (DFL) was 0.77. In December 2020, Tesla's degree of financial leverage (DFL) reached its highest point in the past five years. In December 2019, Tesla's degree of financial leverage (DFL) reached a five-year low of -0.12. In 2018 (0.28, -63.9%), 2019 (-0.12, -144.4%), and 2021 (1.06, -36.7%), Tesla's degree of financial leverage (DFL) will fall, whereas it will climb in 2017 (0.77, +0.4%) and 2020 (1.67, -1,447.9%).

The following businesses are comparable to Tesla, Inc. because they operate in a similar industry or sector. In addition to considering size, growth, and numerous financial parameters, I narrowed the list to the following companies.

Tesla Degree of Financial Leverage (DFL) Benchmarks

Name	Ticker	Degree of Financial Leverage (DFL)
Workhorse Group Inc.	NASDAQCM:WKHS	0.98
Virgin Galactic Holdings, Inc.	NYSE:SPCE	0.98
Rivian Automotive, Inc.	NASDAQGS:RIVN	0.99
Nikola Corporation	NASDAQGS:NKLA	1.00
Phoenix Motor Inc.	NASDAQCM:PEV	1.00
Lordstown Motors Corp.	NASDAQGS:RIDE	1.00
Envirotech Vehicles, Inc.	NASDAQCM:EVTV	1.00
Consumer Discretionary	SECTOR:DSCY.US	1.01
Apple Inc.	NASDAQGS:AAPL	1.02
Tesla, Inc.	NASDAQGS:TSLA	1.03
General Motors Company	NYSE:GM	1.10
Amazon.com, Inc.	NASDAQGS:AMZN	1.15

Shareholders are always subject to standard business risks. EBIT varies due to changes in sales and expenses. When the corporation does not employ any debt, the variability of EPS assessed in terms of the coefficient of variation is the same as that of EBIT. An increase in debt raises the expected value of

EPS and its standard deviation or coefficient of variation. In our case, tesla is not currently issuing dividends, but there is great future probability.

The Firm can use operating and financial leverage in a variety of ways. Tesla Inc can pick between high-automated production processes and a high degree of operational leverage, or it can choose between low-automated production processes and a low degree of operating leverage, as well as a high or low level of debt. Tesla is currently combining very limited operating leverage with increasing financial leverage because its sales are rapidly rising. A company whose revenues fluctuate greatly and irregularly should avoid using excessive leverage since it exposes itself to a high level of risk.

Question 5 (10 + 10)

(a) Analyze the dividend and share buyback policy for the chosen company and which mode is more preferred by the financial managers.

Tesla (TSLA) has returned 1,700% to stockholders in three years through the increase in share price. Tesla has given investors a lifetime's worth of rewards in a short time. Tesla was not always profitable, but that has changed. The company's debt and share issuances diluted shareholders to support growth. Tesla doesn't pay dividends, which is significant for income investors. If lucrative enough, any company, including Tesla, might start paying dividends to shareholders. Dividends rely on a company's business style, growth potential, and financial position. Even with Tesla's tremendous share price run-up, a company's dividend ability rests on fundamentals. Tesla is unlikely to join dividend-paying companies anytime soon, but many growth equities have in recent years.

Competitive Comparison Data

Company	Market Cap (M)	3-Year Average Shar…
Tesla Inc	$ 781,612.77	-6.20
General Motors Co	$ 52,198.15	-2.30
Ford Motor Co	$ 49,690.14	-0.40
Rivian Automotive Inc	$ 33,257.73	0.00
Lucid Group Inc	$ 25,838.56	0.00
Fisker Inc	$ 2,464.32	-2.30
Proterra Inc	$ 1,301.08	0.00
Canoo Inc	$ 528.74	0.00
Workhorse Group Inc	$ 487.95	-37.60
Hyzon Motors Inc	$ 483.41	0.00

(b) What are the reasons you feel that the company is choosing one mode over the other (share buyback vs. dividend)?

Most importantly Tesla does not issue a dividend to its stockholders. Tesla's revenue per share increase has been nothing short of remarkable. It generated more than two hundred times more revenue per share in 2015 than in 2010 when it went public. This level of growth is uncommon, which explains why Tesla's stock has performed so well. Another worry is whether Tesla can continue to maintain its rapid growth rate. The administration recently announced that it anticipates vehicle deliveries to increase by an average of 50 percent per year over the next few years.

In the previous few years, Tesla's shipment volume and income have increased significantly. However, a company's ability to pay dividends to its shareholders ultimately depends on its profitability. While Tesla has been the embodiment of a growth stock due to its top-line growth and enormous share price gains, its profitability relative to its market capitalisation remains low. Currently, the stock is trading at 64 times its estimated earnings for the current year.

Without achieving consistent profitability, a business cannot afford to pay dividends to its shareholders. If a company loses money over time, it will have difficulty remaining in business. However, while this was a problem for Tesla, increased delivery quantities appear to have resolved the issue.

Tesla will primarily raise its capital expenditures and Research & Development investment. "A share repurchase may be viable," depending on Tesla's future cash flow. If Tesla's future cash flow looks promising and the world remains "pretty stable," a "share buyback is on the table."

The increase in vehicle deliveries being sales has directly resulted in better-operating cashflows and significantly improved adjusted earnings (EBITDA). The company appears devoted to utilising all available cash flow for now to enhance the profitability of its operations and fund development plans. There is always the possibility that Tesla's big share price gain may continue, but the stock could also decline. Indeed, Tesla shareholders were reminded of this in early 2022, prompting investors to recall that volatility may work both ways. Even after the stock's summer relief surge, it has declined 29% this year.

(Approximate word limit: 250–300)

Question 6 (10 + 10)

(a) Analyze the trend of the working capital of the company over the past three years.

Working Capital is a measure of a company's operational efficiency and liquidity. Typically, working capital is determined by deducting Current Liabilities from Current Assets. It is a key measure of a company's ability to sustain normal operations without incurring extra debt.

The business has been continuously producing cash flow from operations over capital investment, and better working capital management has resulted in shorter days sales outstanding than days payable outstanding. Sales growth is also helping positive cash generation. On the other hand, they may face

higher capital expenditures during some periods, depending on the speed of capital-intensive projects and rising material costs, supply chain, and labour charges due to the COVID-19 epidemic. As the stock price has risen, they've seen more early conversions of "in-the-money" convertible senior notes, which require them to produce cash or shares. As long as macroeconomic variables support sales patterns, the firm plans to remain self-funded.

As the company continues to increase operational efficiency and process automation, I expect operating expenses relative to revenues to decrease if we see expanding sales and exclude the potential impact of macroeconomic conditions, including increased labour costs and impairment charges on certain assets. Their worldwide expansion will increase operational expenditures in 2022.

Tesla's net working capital last quarter was -$7.569 billion. Tesla's net working capital for fiscal years ending December 2017 to 2021 averaged -$4.365 billion. Tesla's operated at median net working capital of -$3.493 billion from the fiscal years ending December 2017 to 2021.

Tesla previously overcame cash flow issues by obtaining more funds through equity sales. The corporation can also raise operating capital by drastically increasing the amount of debt it carries (debt in the billions of dollars).

In general, organisations with a lot of working capital will grow faster since they may expand and improve their operations with existing resources. Companies with low or negative working capital, on the other hand, may lack the finances required for expansion or future operations.

According to the company's filings, Tesla Inc has a Working Capital of (29.03 Million). This is 100.49% less than the Consumer Cyclical industry and 100.01% less than the Auto Manufacturers industry. The operating capital of all US stocks is 101.96% more than the companies.

Tesla’s Working capital management seeks to better use the company's resources by tracking and optimising the usage of current assets and liabilities. The goal is to maximise profitability while maintaining sufficient cash flow to pay its short-term operating costs and debt obligations.

(b) What areas has the firm improved, and which areas are of concern?

Tesla's current retail approach involves selling its automobiles online and in a handful of company-owned storefronts. This strategy could be enhanced by improving its internet marketing efforts and growing its network of company-owned retailers.

Tesla should focus on developing a more streamlined consumer experience to improve its retailing strategy. This can be accomplished by streamlining and simplifying the purchasing procedure. In addition, Tesla should prioritise offering more individualised customer service. This may involve offering test drives, customising vehicles, and providing more competent and accommodating sales personnel. By enhancing its retailing strategy, Tesla can improve consumer satisfaction and increase sales.