



GESTÃO FINANCEIRA I GESTÃO FINANCEIRA
CORPORATE FINANCE I **CORPORATE FINANCE**

Takehome Assignment 1– Assessment Criteria and Selected Suggested Solutions

LICENCIATURA/GRADUATION

2020-2021

1. Find the 2019's annual financial statements for TESLA, Inc. using the following source: <https://ir.tesla.com/> (No points to be granted / Sem Cotação)

- Form 10k, Tesla Inc.:
https://www.sec.gov/Archives/edgar/data//1318605/000156459020004475/tsla-10k_20191231.htm
 - Consolidated Balance Sheet / Balanço: page 65 / página 65.
 - Consolidated Statements of Operations / Demonstração de Resultados: page 66 / página 66.
 - Consolidated Statements of Cash Flows / Demonstração de Fluxos de Caixa: page 69 / página 69.
- Other sources were also accepted.

2. Based on the consolidated financial statements of TESLA, Inc. perform a financial analysis for 2019 and 2018 using all ratios that you learned in class, which should include the following steps (hint: look at TESLA, Inc.'s notes to the financial statements): (14 points / 14 valores)

a. Do a simplified industry analysis. (2 points / 2 valores)

Examples: SWOT Analysis; Porter's Five Forces; PESTEL Analysis; Key Numbers.

Exemplos: Análise SWOT; Cinco Forças de Porter; Análise PESTEL; Números-Chave.

b. Compute the ratios. (8 points / 8 valores)

Below you can find the suggested solution. Nevertheless, other results were accepted, depending on your assumptions.

A seguir encontram uma proposta de solução. Não obstante, outros resultados foram aceites, dependendo dos vossos pressupostos.

Equity 2018 (Capital Próprio 2018) = Total stockholders' equity + Noncontrolling interests in subsidiaries = 4.923 + 834 = 5.757

Equity 2019 (Capital Próprio 2019) = 6.618 + 849 = 7.467

Debt 2018 (Dívida 2018) = Current portion of debt and finance leases + Debt and finance leases, net of current portion = 2.568 + 9.404 = 11.972

Debt 2019 (Dívida 2019) = 1.785 + 11.634 = 13.419

Cash 2018 = Cash and cash equivalents + Restricted cash + Restricted cash, net of current portion = 3.686 + 193 + 398 = 4.277

Cash 2019 = 6.268 + 246 + 269 = 6.783

Excess Cash = Cash

You should present 28 of the 30 ratios below / Apresentar 28 dos 30 r cios seguintes.

In millions \$	2018	2019
Net Working Capital	$8.307 - 9.993 = -1.686$	$12.103 - 10.667 = 1.436$
Working Capital Requirements	$-1.686 - (4.277 - 2.568) = -3.395$	$1.436 - (6.783 - 1.785) = -3.562$
Market Value of Equity / Valor de Mercado do Capital Pr�prio	$171 * (\$66,56*5) = 885 * \$66,56 = 56.908,8$	$177 * (\$83,67*5) = 885 * \$83,67 = 74.047,95$
Enterprise Value	$56.908,8 + 11.972 - 4.277 = 64.603,8$	$74.047,95 + 13.419 - 6.783 = 80.683,95$
Earnings per Share / Ganho por A�o	$\frac{-976}{171} = -5,70760$ Income Statement / Demonstra�o de Resultados: \$-5,72	$\frac{-862}{177} = -4,87006$ Income Statement / Demonstra�o de Resultados: \$-4,92
Profitability Ratios / R�cios de Rendibilidade		
Gross Profit Margin / Margem Bruta das Vendas	$\frac{4.042}{21.461} = 18,83416\%$	$\frac{4.069}{24.578} = 16,55546\%$
Operating Margin / Margem Operacional das Vendas = EBIT Margin / Margem do EBIT	$\frac{-388}{21.461} = -1,80793\%$	$\frac{-69}{24.578} = -0,28074\%$
Net Profit Margin / Rendibilidade L�quida das Vendas	$\frac{-976}{21.461} = -4,54778\%$	$\frac{-862}{24.578} = -3,50720\%$
Liquidity Ratios / R�cios de Liquidez		
Current Ratio / Liquidez Geral	$\frac{8.307}{9.993} = 0,83128$	$\frac{12.103}{10.667} = 1,13462$
Quick Ratio / Liquidez Reduzida	$\frac{8.307 - 3.113}{9.993} = 0,51976$	$\frac{12.103 - 3.552}{10.667} = 0,80163$
Cash Ratio / Liquidez Imediata	$\frac{4.277}{9.993} = 0,4279(9)$	$\frac{6.783}{10.667} = 0,63589$

In millions \$	2018	2019
Efficiency and Working Capital Ratios / Rácios de Eficiência e Fundo Maneio		
Asset Turnover / Rotação do Ativo	$\frac{21.461}{29.740} = 0,72162$	$\frac{24.578}{34.309} = 0,71637$
Fixed Asset Turnover / Rotação do Ativo Fixo	$\frac{21.461}{6.271 + 11.330 + 2.090} = 1,08989$	$\frac{24.578}{6.138 + 10.396 + 2.447} = 1,29692$
Accounts Receivable Days / Prazo Médio Recebimentos	$\frac{949}{21.461/365} = 16,14$	$\frac{1.324}{24.578/365} = 19,66$
Accounts Payable Days / Prazo Médio de Pagamentos	$\frac{3.405}{17.419/365} = 71,35$	$\frac{3.771}{20.509/365} = 67,11$
Inventory Days / Prazo Médio Permanência Inventários	$\frac{3.113}{17.419/365} = 65,23$	$\frac{3.552}{20.509/365} = 63,21$
Accounts Receivable Turnover / Rotação Recebimentos	$\frac{21.461}{949} = 22,61433$	$\frac{24.578}{1.324} = 18,56344$
Accounts Payable Turnover / Rotação Pagamentos	$\frac{17.419}{3.405} = 5,11571$	$\frac{20.509}{3.771} = 5,43861$
Inventory Turnover / Rotação de Inventários	$\frac{17.419}{3.113} = 5,59557$	$\frac{20.509}{3.552} = 5,77392$
Interest Coverage Ratio (you could also do with EBITDA) / Rácio de Cobertura dos Encargos Financeiros da Dívida (também poderia ser calculado com o EBITDA)		
EBIT/Interest Coverage Ratio	$\frac{-388}{663} = -0,58522$	$\frac{-69}{685} = -0,10073$

In millions \$	2018	2019
Leverage Ratios / Rácios de Alavancagem		
Debt-Equity Ratio / Rácio Dívida/Capital Próprio	$\frac{11.972}{5.757} = 2,07956$	$\frac{13.419}{7.467} = 1,79711$
Debt-to-Capital Ratio / Grau de Endividamento Total	$\frac{11.972}{5.757 + 11.972} = 0,67528$	$\frac{13.419}{7.467 + 13.419} = 0,64249$
Debt-to-Enterprise Value Ratio	$\frac{11.972 - 4.277}{65.194,8} = 0,11803$	$\frac{13.419 - 6.783}{81.198,95} = 0,08173$
Equity Multiplier / Multiplicador do Capital Próprio	$\frac{29.740}{5.757} = 5,16589$	$\frac{34.309}{7.467} = 4,59475$
Investment Returns / Retornos do Investimento		
Return on Equity / Retorno do Capital Próprio	$\frac{-976}{5.757} = -0,16953$	$\frac{-862}{7.467} = -0,11544$
Return on Assets / Retorno dos Ativos	$\frac{-976 + 663}{29.740} = -0,01052$	$\frac{-862 + 685}{34.309} = -0,00516$
Return on Invested Capital / Retorno do Capital Investido	$\frac{-388 (1 + 0,05771)}{5.757 + 11.972 - 4.277} = -0,030516$	$\frac{-69 (1 + 0,16541)}{7.467 + 13.419 - 6.783} = -0,005675$
Valuation Ratios / Rácios de Avaliação		
Market-to-Book Ratio	$\frac{56.908,8}{5.757} = 9,88515$	$\frac{74.047,95}{7.467} = 9,91669$
P/E Ratio	$\frac{\$66,56 * 5}{-5,72} = -58,18182$	$\frac{\$83,67 * 5}{-4,92} = -85,03049$
Enterprise Value Ratios (/Sales)	$\frac{64.603,8}{21.461} = 3,01029$	$\frac{80.683,95}{24.578} = 3,2827$

c. Interpret the ratio considering the company, industry and context specificities. (4 points / 4 valores)

Interpret the ratios (Profitability, Liquidity, Efficiency and Working Capital, Interest Coverage, Leverage, Investment and Valuation), as well as analyzing the evolution of the ratios from 2018 until 2019

Interpretação dos rácios (Rendibilidade, Liquidez, Eficiência e Fundo Maneio, Cobertura de Encargos da Dívida, Alavancagem, Investimento e Avaliação), bem como analisar a evolução dos rácios de 2018 para 2019.

3. Based on the analysis in question 2., contrast the figures TESLA, Inc. with data on peer companies in the industry (see table below). Comment. (4 points / 4 valores)

3,5 points: Compare values of 2019 with peer companies in the topics presented in the table (Profitability, DuPont / Earning Power, Liquidity, Leverage, Operating).

0,5 points: Extra ratios for comparison (EBITDA Margin, Pretax Margin, % LT Debt to Capital Ratio, ...).

3,5 valores: Comparar valores de 2019 com empresas da indústria nos tópicos apresentados na tabela (Profitability, DuPont / Earning Power, Liquidity, Leverage, Operating).

0,5 valores: Rácios extra para a comparação (EBITDA Margin, Pretax Margin, % LT Debt to Capital Ratio, ...).

4. Now suppose that TESLA, Inc.'s managers hired your group for a consulting project on financial analysis. For each of the topics below, provide two recommendations to enhance TESLA, Inc.'s: (2 points / 2 valores)

0,5 points of each recommendation (50% for recommendation and 50% for explanation).

Limited to 2 recommendations for efficiency and 2 for return.

0,5 valores por cada recomendação (50% pela recomendação e 50% para a explicação).

Limite de 2 recomendações para eficiência e 2 para retorno.

a. Efficiency (Example / Exemplo)

- Decrease in Inventory Days. The company needs less storage space, so could reduce the storage cost.
- Diminuição do Prazo Médio de Permanência no Inventário. A empresa necessita de menos espaço de armazenagem, podendo levar a uma redução dos custos de armazenagem.

b. Return (Example / Exemplo)

- Increase the leverage. Equity multiplier is a component of DuPont Identity, despite of the risk increase, the return of the company increases.
- Aumento da alavancagem. O multiplicador de capital próprio é uma componente da identidade DuPont, apesar de o risco aumentar, o retorno da empresa aumenta.