

DISCOUNTED CASH FLOW

Link to Excel sheet is:

<https://docs.google.com/spreadsheets/d/1PhjSu4UnyQos6DL6y65W0ii5qXhviOjv/edit?usp=sharing&ouid=106858114269912162160&rtpof=true&sd=true>

1. What factors can affect the composition of a company's current assets vs long-term assets?

In given data, company's historical data shows that its Current Assets are almost 70% of its long-term assets, which suggests few key points about its financial strategy and operations. Several factors can influence the composition of a company's current assets versus long-term assets:

1. **Industry Type:** Different industries have varying requirements for assets. For example, manufacturing companies often have higher long-term assets due to investments in machinery, while service-oriented companies might have more current assets.
2. **Business Model:** Companies with a business model focused on quick inventory turnover or short sales cycles tend to have higher current assets. Conversely, businesses with long-term contracts or capital-intensive operations might have more long-term assets.
 - The fact that both current and long-term assets are increasing consistently points to sustained business growth. The company is investing in long-term assets to support future expansion, such as upgrading facilities, acquiring new technologies, or expanding its operational capacity. At the same time, it is scaling its current assets to ensure operational stability.
3. **Growth Stage:** Startups or rapidly growing companies might prioritize current assets to support day-to-day operations, while mature companies might focus on accumulating long-term assets.
4. **Investment Strategy:** Companies that prioritize reinvestment into their operations may hold more long-term assets, like property, plants, or equipment. Others might prefer liquidity and thus maintain higher current assets.
 - The company is maintaining a strategic balance between short-term liquidity and long-term investments. The consistent ratio of current assets to long-term assets suggests a well-managed growth strategy, where the company is expanding its operations while ensuring sufficient liquidity to cover immediate obligations.
5. **Economic Environment:** In uncertain economic conditions, companies might increase their current assets (e.g., cash reserves) to ensure liquidity. In contrast, during stable economic times, they might invest more in long-term assets.

6. **Financial Strategy:** Companies aiming to manage liquidity and working capital efficiently might maintain higher current assets. Those focused on long-term growth may allocate more resources to long-term assets.
 - The ongoing increase in both asset types indicates that the company is committed to a long-term vision. This approach could be aimed at achieving sustainable growth, maintaining competitive advantages, and securing its position in the market over the long term.
 - By keeping current assets at 70% of long-term assets, the company is striking a balance between growth and risk management. This ratio suggests that the company is cautious about overextending itself and is prepared to manage short-term financial needs effectively, reducing the risk of liquidity problems during periods of economic fluctuation.
7. **Regulatory Environment:** Certain regulations might require companies to maintain a specific composition of current vs. long-term assets, particularly in industries like banking and insurance.
8. **Tax Considerations:** Tax laws can influence asset allocation. For example, companies might invest in long-term assets to benefit from depreciation or capital gains tax advantages.
 - As tax rate is assumed to be decreased in future , this is not the reason for increasing Capex or asset allocation.
9. **Operational Needs:** Seasonal businesses or those with fluctuating demand might adjust their current asset levels frequently, while companies with steady operations might have a more balanced asset composition.
 - The 70% ratio indicates that the company has a solid approach to managing its working capital. It likely has efficient processes in place for inventory management, receivables, and cash flow, allowing it to maintain a healthy level of current assets relative to its long-term investments.
10. **Access to Capital:** Companies with easier access to financing may opt for higher current assets to maintain liquidity, while those with limited access might invest in long-term assets to sustain growth.

In summary, the company's consistent 70% ratio of current to long-term assets, along with the ongoing increase in both, reflects a well-balanced growth strategy that prioritizes both immediate operational needs and long-term sustainability. This suggests strong financial management, operational efficiency, and a clear focus on future expansion.

2. How can a company's debt-to-equity ratio impact its creditworthiness and access to capital?

A company's debt-to-equity ratio is a key financial metric that significantly impacts its creditworthiness and access to capital. Here's how:

1. Creditworthiness:

- **High Debt-to-Equity Ratio:** A high ratio indicates that the company relies heavily on debt financing relative to equity. This can be a red flag for creditors, as it suggests higher financial risk. If a company has too much debt, it may struggle to meet its debt obligations, making it a riskier borrower. As a result, credit agencies may assign a lower credit rating, which negatively impacts the company's creditworthiness.
- **Low Debt-to-Equity Ratio:** A lower ratio indicates that the company is less leveraged and relies more on equity financing. This is generally seen as a sign of financial stability and lower risk, making the company more attractive to lenders. A strong equity base can also absorb more losses, leading to a higher credit rating and improved creditworthiness.

2. Access to Capital:

- **Impact of High Debt Levels:** When a company has a high debt-to-equity ratio, lenders might perceive it as being close to over-leveraged. This can limit its ability to access additional debt financing or result in higher interest rates due to the perceived risk. Investors might also be wary of investing in a company with high debt levels, fearing potential financial instability or dilution of their equity.
- **Improved Access with Lower Ratio:** Companies with a lower debt-to-equity ratio may find it easier to access capital. Lenders are more likely to offer favorable loan terms, such as lower interest rates, because the company is seen as less risky. Additionally, equity investors might be more willing to invest, knowing that the company has a balanced approach to financing and is less burdened by debt.
- **Cost of Capital:** A balanced debt-to-equity ratio can optimize a company's cost of capital. While some debt can be beneficial due to the tax deductibility of interest payments, too much debt increases the cost of capital, making it more expensive to finance new projects. Conversely, a very low debt-to-equity ratio might mean the company isn't fully leveraging the benefits of debt, potentially leading to a higher overall cost of capital due to the higher cost of equity financing.

3. Long-Term Implications:

- **Financial Flexibility:** A manageable debt-to-equity ratio gives the company more flexibility to pursue growth opportunities, as it can raise additional capital without

significantly increasing its financial risk. Companies with a lower ratio can also weather economic downturns better, as they are less burdened by fixed debt obligations.

- **Market Perception:** Investors and analysts closely watch the debt-to-equity ratio as an indicator of financial health. A well-managed ratio can enhance the company's reputation in the market, making it easier to attract both debt and equity financing on favorable terms.

In summary, the debt-to-equity ratio plays a crucial role in determining a company's creditworthiness and access to capital. A balanced ratio indicates sound financial management, leading to better credit ratings, lower borrowing costs, and easier access to both debt and equity financing. Conversely, a high ratio can signal financial risk, reducing creditworthiness and limiting access to affordable capital.

3. Debt-to-Equity Ratio: How has the debt-to-equity ratio changed over the four years? (take into consideration total liabilities and total equity) Is the company relying more on debt financing or equity financing?

The formula for debt to Equity Ratio is
$$\frac{\text{Total Liabilities}}{\text{Total Equity}}$$

In the given data Debt to Equity ratio for various years is:

Year	2018	2019	2020	2021
D/E Ratio	2.12	1.91	1.97	2.28

As we can see the D/E ratio is 2.12 in 2018 which declined in 2019 and increases little in 2020 and heavily in 2021. A high D/E ratio is often associated with high investment risk; it means that a company relies primarily on debt financing. A lower D/E ratio is generally safer, as it indicates less reliance on debt, but too low of a ratio might suggest the company is not taking advantage of potential leverage benefits. Conversely, a very high D/E ratio increases financial risk.

The D/E ratio values are consistently above 1, meaning the company relies more on debt than equity for financing its operations. This indicates higher financial leverage, which could be risky if the company faces downturns in its revenue or profitability.

Trend Analysis:

- **Year 1 to Year 2 (2.12 to 1.91):** The decrease in the D/E ratio suggests that the company reduced its reliance on debt relative to equity, possibly due to paying down debt or improving earnings.

- **Year 2 to Year 3 (1.91 to 1.97):** The slight increase here indicates a minor shift back towards debt financing, but it's still relatively stable.
- **Year 3 to Year 4 (1.97 to 2.28):** The significant increase in the D/E ratio in the final year points to a notable rise in debt as equity is constant, suggesting the company have taken more debt.

Risk Implications: The upward trend in the last year could be a red flag, as increasing debt levels without a proportional increase in equity could strain the company's finances, especially if interest rates rise or earnings decline. But there is one more thing to notice here is that the cost of debt is just 2.3% which further reduces to 1.8% after tax deduction while the cost to equity is 6.4%. which seems to be a possible reason for increase in debt to equity ratio and which makes sense too as company revenue, assets and capex is also increasing with YoY, but equity is remaining constant. So, it can be a sign of better growth and more profits in future due to saving of cost of capital acquisition.

4. Revenue Growth: How has the company's total revenue grown over the three years? What segments are driving this growth (merchandise sales, membership fees)?

As we know that growth in revenue is 9.2% in 2020 and it increased to 17.5 and after that we projected it to be 10% for some years and the low growth may be due to peak growth or projections limitations. There are various factors which can be the possible reason for this:

- **Operating Income:** We can see the operating income is increasing by each YoY with 14.7% increase in 2020 and 23.4% increase in 2021 , which is an main factor responsible for increase in total revenue. It indicates that the company may be strengthening its position against competitors. This could be the result of improved product offerings, better customer engagement, or capturing more market share.
- **Merchandise Sales Revenue:** Merchandise Sales Revenue is also increased from 9.2% to 17.7% which is quite matching with increase in total revenue growth rate, which shows that sale of products are the main reason for increase in revenue growth. This indicates strong product demand and effective sales strategies, which suggests the company is performing well in its core business, efficiently converting inventory into sales, and likely benefiting from a robust market presence. It may also reflect successful pricing, marketing, and distribution efforts. Overall, it signals a healthy business with strong customer appeal and operational effectiveness.
- **Membership Fee Revenue:** This revenue is also increased from 5.6 % in 2020 to 9.5% in 2021. This gain indicates growing customer base and strong retention, indicating that the membership model is successful. This growth reflects customer satisfaction and loyalty, as more customers see value in paying for membership benefits. Additionally, it contributes to revenue stability and predictability, as recurring fees provide a steady income stream. The increase in membership fees also supports overall revenue

growth, highlighting the effectiveness of the company's strategy in monetizing customer relationships.

5. Gross Margin: Calculate and compare the gross margin (consider total revenue and total operating expense) across the three years. Is the company able to maintain or improve its margins?

The formula to Gross margin is $\frac{Revenue - COGS}{Revenue}$, but it is explicitly said to use total operating expenses to found the gross margin which actually will represent the operating margin. So including COGS, Operating Expenses, SGA Expenses and Depreciation and Amortization expenses too in calculating COGS. Gross margin ratio is 3.1%, 3.26% and 3.42% in 2019, 2020 and 2021 respectively.

It can be seen that with the increase in revenue Gross margin is also increasing with time. Infact it is improving at the rate of 5% for both years. The possible reasons for this can be:

- **COGS:** The cogs % to total revenue remains constant with each passing year so it is not impacting much to the revenue growth. As increase in Cogs is similar to increase in Revenue from previous years, it has not much impact.
- **SG&A:** The SG&A % to total revenue is decreasing with consecutive years which is a good sign to revenue growth as company need to spend less for earning more revenue in future. Revenue is increased by 9.2 and 17.5% but SG & A is increased by 8.8 and 13.6 5 only, which indicates successful strategies in sales, marketing, product development, or expansion into new markets.

The consistent increase in operating margin alongside revenue growth demonstrates that the company's profitability is strengthening, not just due to higher sales but also due to better cost control and operational efficiency.

6. How can investors utilize free cash flow analysis to compare different companies in the same industry?

Investors can utilize free cash flow (FCF) analysis to compare different companies in the same industry by focusing on several key aspects:

- **Valuation:** FCF helps determine a company's intrinsic value by discounting future cash flows. Comparing the discounted FCF of different companies can highlight which stocks are undervalued or overvalued relative to their peers.
- **Profitability and Efficiency:** Higher FCF indicates better profitability and efficient capital use. Comparing FCF margins (FCF as a percentage of revenue) reveals which companies are more effective at converting revenue into cash.
- **Growth Potential:** Analyzing trends in FCF growth helps investors assess which companies are likely to grow their cash flows and invest in future opportunities.

- **Financial Health:** Companies with strong and consistent FCF are better positioned to handle debt, invest in growth, and return capital to shareholders. Comparing FCF allows investors to gauge financial stability and flexibility.
- **Dividend and Share Repurchases:** Companies with strong FCF can sustain or increase dividends and share buybacks. Comparing FCF helps investors identify companies with a reliable track record of returning capital to shareholders.

By comparing these aspects, investors can identify which companies in the same industry are more financially sound, efficient, and promising for investment. As we are not given the type of industry the company belongs we can't compare it with market value. Or provide insights about it.

7. How efficiently is the company managing its working capital? What trends are evident in the management of current assets and liabilities over the years?

Net Working Capital = Current Assets - Current Liabilities

- We can see the Net Working Capital (NWC) is decreased in 2020 by 33% which is again decreased by 14 % in 2021 but that decrease is comparatively better than 2020 decrease in working capital.
- **Negative NWC** generally means that the company's current liabilities exceed its current assets. This can indicate potential liquidity issues, where the company might struggle to cover short-term obligations without relying on external financing.
- **Decreasing NWC** (33% in 2020 and 14% in 2021) suggests that this situation is worsening, which could lead to increased financial strain. But declining NWC can positively impact cash flow in the short term, as the company is reducing the cash tied up in working capital. This might temporarily improve liquidity, but it's not sustainable if it leads to difficulty in meeting obligations.
- In some cases, a negative NWC isn't necessarily a bad sign. For companies with very efficient operations or those that collect payments quickly while delaying payments to suppliers (e.g., retail companies), negative NWC can be a result of effective cash management. However, the consistent decrease might indicate the company is increasingly dependent on its creditors to finance operations, which could be risky in the long run.

8. How has the company's capital expenditure changed over the years? What does this indicate about the company's investment in future growth?

Here capital expenditures (CapEx) increase by 98% in the 2020 but then decrease by 33% in 2021, which means we did capex but 33% lesser than 2020 which shows:

- **2020 Growth:** A 98% increase in CapEx in 2020 suggests a significant investment, likely aimed at expansion, upgrading infrastructure, or acquiring new assets. This

might indicate strategic growth initiatives, such as entering new markets, increasing production capacity, or adopting new technology.

- **2021 Decline:** The subsequent 33% decrease in CapEx in 2021, despite being negative, doesn't imply a reduction in absolute terms. Given the substantial increase in 2020, a 33% decrease might still represent a relatively high level of investment compared to the base year. This could indicate that after a significant one-time investment, the company is either:
 - **Completing Major Projects:** The bulk of the heavy investment may have been completed in the second year, requiring less CapEx in the third year.
 - **Optimizing Costs:** The company might be focusing on optimizing or fine-tuning its newly acquired assets or operations rather than continuing to spend heavily.
 - **Strategic Adjustment:** There may have been an adjustment in strategy, where the company re-evaluates its capital spending priorities, perhaps due to changes in market conditions or internal financial goals.

Long-Term Implications: The pattern of CapEx spending may indicate a peak in capital-intensive activities, followed by a stabilization phase. This could suggest that the company is moving from an aggressive expansion phase to a period of consolidation and efficiency improvement.

9. How can trends in the net profit margin ratio help assess a company's financial performance and operational efficiency?

$$\text{Net Profit margin ratio} = \frac{\text{Net Profit}}{\text{Total Revenue}}$$

Profitability Measure: The net profit margin ratio expresses the percentage of revenue that remains as profit after all expenses, taxes, and costs are deducted. It indicates how efficiently a company is converting revenue into actual profit. The net profit margin ratios of 2.42%, 2.43%, and 2.59% in 2019, 2020 and 2021 respectively shows a slight improvement in profitability.

Operational Efficiency: It also reflects the company's ability to manage its expenses relative to its revenue, providing insights into operational efficiency and cost control. The gradual increase from 2.42% to 2.59% suggests that the company is becoming more efficient in managing costs and/or generating higher revenue, leading to more profit being retained. This upward trend indicates a positive shift in financial performance, reflecting better profitability and potentially stronger financial health.

Other Insights:

- **Depreciation and Amortization:** If we see D&A as % of PP&E, we saw that it increased a bit from 7.6% to 7.9% in 2020 but decreased to 7.2% in 2021n which is a good sign as our PP&E is increasing but depreciation is decreasing.
- **Tax %:** Tax % is also decreasing constantly with each consecutive year after an increase in 2020 which also resulting the more profits in future.
- **Net Income:** Net income is improved from 9% to 25% while revenue is improved from 9 to 17% only, which is the effect of decrease in SG&A expenses, taxes etc. As revenue growth is accompanied by improved profit margins, it suggests that the company is managing its operations efficiently while scaling up. This is a sign of good management and effective use of resources.
- **Enterprise value (EV) and equity value:**
 - **Enterprise Value (EV) - 155,376.** EV represents the total value of the company, including debt, preferred stock, and equity. It reflects what it would cost to purchase the entire company, including taking on its debt but excluding its cash.
 - **Debt and Other Liabilities:** The fact that EV is slightly higher than the equity value suggests that the company has some debt or other non-equity claims (like preferred stock or minority interest) that need to be accounted for in the total valuation.
 - **Equity Value - 154,371.** Market Value of Equity attributed to shareholders, also known as market capitalization. It's the value of the company after all liabilities have been settled.
 - **Shareholder Perspective:** This is the amount that shareholders would theoretically receive if the company were liquidated and all debts paid off.
- **Comparison of EV and Equity Value:**
 - **Small Difference:** The small difference between EV (155,376) and equity value (154,371) suggests that the company has relatively low debt levels or other non-equity liabilities. The difference of 1,005 indicates that while the company does have some debt, it is not heavily leveraged.
 - **Financial Health:** A small gap between EV and equity value often points to a financially healthy company with manageable debt levels.

Conclusion: The close proximity of enterprise value and equity value indicates that the company has a low level of debt, which means most of the value is in equity. This typically suggests a less risky investment from a financial leverage perspective and a focus on equity financing rather than heavy reliance on debt.

