**Amazon.com Inc. Ratio Analysis Report**

**Liquidity Ratios**

Liquidity analysis focuses on cash flows and measures a company’s ability to meet its short-term obligations. Liquidity measures how quickly assets are converted into cash without a loss in value if necessary to meet short-term obligations. Liquidity ratios are key predictor of a company’s ability to make timely payments to creditors and to continue to meet obligations to lenders when faced with an unforeseen event. Below are Amazon Inc liquidity ratios calculated from its financial statements:

**Current Ratio**

This ratio expresses current assets in relation to current liabilities. A higher ratio indicates a higher level of liquidity (i.e., a greater ability to meet short-term obligations). A lower ratio indicates less liquidity, implying a greater reliance on operating cash flow and outside financing to meet short-term obligations. A current ratio of higher than 1 show that the company has the ability to pay all of its current liabilities.

Amazon.com Inc. current ratio declined from 2021 to 2022 (from 1.14 to 0.94)

The Current ratio is greater than 1 indicating the short-term asset’s ability to meet short term liabilities. Quick and Cash ratios above 0.5 which also indicates that the company can meet more than 50% of its short-term liabilities with its cash in hand. The decline in current ratio was mainly to be attributed to a reduction of marketable securities (following the sale of the company’s stake in Rivian).

As an online marketplace where thousands of vendors are hosted on site, Amazon’s payable days is typically higher than other companies as it is part of its 90-day credit policy. As a result of Amazon’s nature of business, its payable balances are higher than its inventories and receivables where it holds inventory on behalf of its vendors. Therefore, working capital is negative and so is the trading cycle. On a year over year basis the number has worsened, but can be supported with the argument that Amazon has started its own fulfilment services and is a fast growing company.

Operating with a negative Trading Cycle became a source of cash for the company, instead of being a cost for it. However, it can be observed that the Trading Cycle days have reduced over the years indicating that the number of days that they can hold on to the cash has reduced.

**Quick Ratio**

This ratio, also known as the acid test ratio, measures immediate liquidity. It is more reliable than the current ratio because it includes only the more liquid current assets (cash, marketable securities and account receivable, sometimes referred to as “quick assets”) in relation to current liabilities. Like the current ratio, a higher quick ratio indicates greater liquidity ability to service short-term obligations.

Amazon.com Inc. current ratio also declined from 2021 to 2022 (from 0.91 to 0.72)

**Cash Ratio**

The cash ratio is the most reliable measure of an entity’s liquidity in a crisis situation. Only highly marketable short-term investments and cash are included. The higher it is the better.

Amazon.com Inc. current ratio declined as well from 2021 to 2022 (from 0.68 to 0.45) This ratio

**Defensive Interval Ratio**

This measures how long the company can continue to pay its expenses from its existing liquid assets without receiving any additional cash inflow. The higher the Defensive Interval Ratio the better as it indicates greater liquidity.

Defensive interval ratio for Amazon.com Inc is 116.5 days, a decline from 143.7 days in 2021, but it is still good.

**Inventory Days**

It measures how long a product is in storage before being sold or the average number of days it takes to sell off inventory. A lower number of days is preferred as it indicates the inventory is liquid and more cash flow for a company.

Amazon .com Inc inventory days in 2022 is 43.5 days which is approximately the same as that of 2021.

**Payable days**

It measures the average number of days a company needs to pay its bills and obligations. A higher number of days is desirable as it means a company can delay making payments and use the available cash for short-term investments as well as to increase their working capital and free cash flow.

Amazon .com Inc payable days in 2022 is 100.6 days from 105.4 in 2021 which is considerable high.

**Receivable Days**

This measures the average number of days it takes a company to receive payment for a sales. A low number of days indicates that the company is getting its payments quickly. That money can be put back into the business to good effect while A higher number suggests that a company is experiencing delays in receiving payments, which can result in a cash flow problem.

Amazon .com Inc Receivable Days is 2022 is 30.1 days compared to 25.6 days in 2021. A receivable day of under 45 days is generally considered low.

**Net trading cycle**

This is a measure that expresses the length of time that it takes for a company to convert its investments in inventory and other resources into cash flows from sales. This considers the inventory days, the receivable days and the payable days. It is expressed as Inventory days + Receivable days – Payable Days. The lower the net trading cycle the better as it means a company is operating efficiently.

The net trading cycle for Amazon.com Inc is -27 in 2022 compared to -36.1 in 2021. The negative A negative value means that inventory is sold before the company pays for it which means the vendors are financing the business operations.

**Working Capital as a % of Sales / Working Capital**

The measures the number of times working capital has been turned over or the percentage of sales generated by every dollar of working capital used, so the higher the better.

Amazon .com Inc Working Capital as a % of Sales is negative in in 2022 (-1.67%) compared to 2021(4.11%). The negative figure is because its working capital is negative. Working capital is the difference between the company’s current assets and current liability and it is negative because the current liabilities are higher than the current asset. Turning negative means the company must raise funds immediately by either borrowing money or selling more of its products for cash to satisfy its current obligations.

**Profitability Ratios**

**Gross margin**

The ratio indicates the percentage of each dollar of revenue that the company retains as gross profit. It also indicates the percentage of revenue available to cover operating and other expenditures. Hence, the higher this ratio the better.

Amazon .com Inc gross profit margin ratio improved slightly from 2021 to 2022 (42.03% to 43.81%)

It is notable that Amazon’s Technology & content and Sales & marketing have seen sharp increases, indicating the heavy spend on AWS and Prime Video content. While the e-commerce segment is seen to be normalizing post the Covid-19 boom, sales reflect the increasing global inflation levels.

**EBITDA Margin**

This is earnings before interest and tax, depreciation and amortization as a percentage of total revenue. EBITDA margin measures how much cash profit a company makes each year. It is a more effective indicator than its net profit margin because it minimizes the non-operating and unique effects of depreciation recognition, amortization recognition, and tax laws.

Amazon .com Inc EBITDA margin reduced slightly from 2021 to 2022 (12.62% to 10.51%).

**EBIT Margin**

This measures the percentage of a company's earnings before interest and taxes that are generated from its operations. This metric indicates a company's ability to generate profits from its core business. It is the same as a company’s operating profit margin. The higher the operating profit, the higher the ratio.

Amazon .com Inc EBITDA margin reduced from 2021 to 2022 (5.30% to 2.38%).

**Net margin**

This is one of the most important indicators of a company's overall financial health and measures how much net income or profit is generated as a percentage of revenue. Net profit margin helps investors assess if a company's management is generating enough profit from its sales and whether operating costs and overhead costs are under control. The higher the net income, the higher is the margin.

Amazon.com Inc. net profit margin ratio deteriorated significantly from 2021 to 2022 (7.10% to -0.53%)

**Solvency/ debt management**

Amazon’s long-term liabilities have been increasing over the years as the company has increased its Financial lease commitments to facilitate the number of new fulfilment centres opened over the last year. Although the long-term debt remain rather steady, financial lease commitments have dramatically increased which has increased the debt service burden as well. However, the company has adequate levels of interest coverage and free cash flow indicating its financial health. However, the increase in the debt level would also mean that the company’s borrowing capacity in future is strained where it might have to pay higher interests to secure more debt.

**Debt to equity (D/E)**

This measures the amount of debt capital relative to equity capital. A higher ratio generally means higher financial risk and thus indicates weaker solvency.

Amazon.com Inc’s debt to equity ratio deteriorated from 2021 to 2022 (0.35 to 0.46) which means the company’s financial risk has increased from the previous year.

**Debt to total assets**

This is calculated as a company’s total debt divided by its total assets. This ratio measures the percentage of the company’s total assets financed with debt. A higher ratio suggests higher financial risk and thus indicates weaker solvency.

Amazon.com Inc. debt to asset ratio deteriorated slightly from 2021 to 2022 (0.12 to 0.15) which means the percentage of assets financed with debt increased.

**Long-term debt to capital**

This measures the percentage of a company’s capital (debt plus equity) represented by debt. This ratio helps to identify where a company’s main source of funds comes from. As with the previous ratio, a higher ratio generally means higher financial risk and thus indicates weaker solvency.

Amazon.com Inc. Long-term debt to capital ratio also deteriorated from 2021 to 2022 (0.26 to 0.31) which means the amount of debt in the company’s capital structure has increased from previous year.

**Times interest earned**

This ratio measures the number of times a company’s operating income could cover its interest payments. It is calculated as EBIT divided by interest payments. A higher ratio indicates stronger solvency, offering greater assurance that the company can service its debt from operating earnings.

Amazon.com Inc times interest earned reduced significantly from 2021 to 2022 (13.75 to 5.17). This means the number of times it can cover its interest payment reduced significantly, which suggests a weaker solvency.

**Debt coverage**

This measures a company’s ability to pay its debt obligation from its available cash flow. This shows investors and lenders whether a company has enough income to pay its debts. The ratio is calculated by dividing net operating income by debt service, including principal and interest. A debt coverage ratio of less than one suggests insufficient income to cover debt and hence higher financial risk.

Amazon.com Inc debt coverage deteriorated significantly from 2021 to 2022 (0.53 to 0.19). 2022 ratio of 0.19 indicates the company’s income could cover only 19% of annual debt payments which suggests weaker solvency.

**Free cash flow (FCFE) per share**

FCFE calculates how much cash is available to the equity shareholders of a company after all expenses, reinvestment, and debt are paid. It is composed of Cash from Operating activities less investment in working capital plus net borrowing. The higher the free cash flow to equity the higher the higher the free cash flow to equity per share

Amazon.com Inc Free cash flow to equity improved significantly from 2021 to 2022 (2.890b to 7.014b), hence an increase in Free cash flow to equity per share (0.28 to 0.69)

**Asset utilization**

**Total asset turnover**

This is the ratio of a company’s total sales or revenue to average assets. This ratio helps us to understand how effectively a company is using its assets to generate sales. A total asset turnover

ratio greater than 1 means an asset of lower valuer is used to generate revenue of higher value which indicates a company generates sufficient revenue from its assets.

Amazon.com Inc’s total asset turnover reduced slightly from 2021 to 2022 (1.12 to 1.11) but its greater than 1 which suggests assets were being used efficiently.

Amazon has a large portion of goodwill in its asset base, where the Fixed asset turnover is almost three times higher than the total asset turnover. The goodwill and intangibles are manly as a result of acquisitions in addition to the increased R&D spending on AWS which we will have to closely watch for future profitability.

**Fixed asset turnover**

Similar to total asset turnover, fixed assets turnover reveals how efficiently a company is at generating revenue from its existing fixed assets. It is calculated by dividing net revenue by average fixed assets. A ratio greater than one is desired as it suggests efficient use of fixed assets.

Amazon.com Inc’s fixed asset turnover reduced slightly from 2021 to 2022 (1.81 to 1.63) but it’s greater than 1 which suggests fixed assets were being used efficiently.

**Inventory Turnover**

This ratio measures the number of times that a company sells or replaces its inventory balance across a specific period. It is found by dividing the cost of goods sold by the average inventory. A higher ratio suggests an efficient use of inventory.

Amazon.com Inc inventory turnover increased slightly from 2021 to 2022 (8.34 to 8.40) which suggests inventories were being used efficiently.

**Return on assets (ROA)**

This measures the return or income earned by a company from its assets and indicates how efficient a company’s management is in generating profit from their total assets. The higher the ratio, the more income is generated by a given level of asset. It is computed as net income divided by average total asset.

Amazon.com Inc return on asset deteriorated significantly from 2021 to 2022 (7.93% to negative 0.59%) as the company had a net loss at year end.

**Investor/market ratios**

ROE, ROA and ROCE all are within the health territory, however, have declined slightly compared to previous year. Furthermore, given Amazon’s valuations, one would expect the ratios to be better as there are many other smaller companies with better returns than Amazon, however, it is notable that these valuations are backed by Amazon’s expansion.

**Price to equity (P/E)**

The P/E ratio is calculated as the share price of a company divided by its earnings (net profit) per share (EPS). The ratio is used by investors to determine the relative value of a company's shares comparison to others in the same sector. A high P/E ratio can mean that a stock's price is high relative to earnings and possibly overvalued while a low P/E ratio might indicate that the current stock price is low relative to earnings and possibly undervalued.

Amazon.com Inc’s P/E ratio deteriorated from 41.11 in 2021 to 0 in 2022 as the company made net loss in 2022 and the share price could possibly be undervalued.

**Earnings per share (EPS)**

This is a company's net profit divided by the number of common shares it has outstanding. It serves as an indicator of a company's profitability. It indicates how much money a company makes for each share of its stock and is a widely used metric for estimating corporate value.

Amazon.com Inc’s EPS ratio deteriorated from 3.24 in 2021 to 0 in 2022 as the company made a net loss.

**Price to book value (PBV)**

PBV ratio is a company price per share divided by the book value per share. Investors use the price-to-book ratio to compare a company's market capitalization to its book value and locate undervalued companies. A low PBV ratio is good for investors as it means the company’s stock may be undervalued.

Amazon.com Inc’s PBV ratio reduced slightly from 9.92 in 2021 to 9.29 in 2022.

**Return on equity (ROE)**

This is calculated by dividing net income by shareholders' equity. It measures how efficiently a company generates profit from its equity. Hence, the higher the ROE the better a company is at converting its equity financing into profits.

Amazon.com Inc’s ROE deteriorated significantly from 2021 to 2022 (24.23% to negative 1.86%) as the company made a net loss at year end. This means the company is making a loss on its equity financing.

**Return on capital employed (ROCE)**

Just like the ROE, the ROCE helps to access if a company is generating profit from its capital as it is put to use. Capital includes both debt and shareholders’ equity. Higher ratios tend to indicate that a company is profitable.

As expected Amazon.com Inc’s ROCE deteriorated significantly from 2021 to 2022 (17.84% to negative 1.28%) as it generated a net loss.

**Enterprise value to EBITDA (****EV/EBITDA)**

EV/EBITDA is a ratio that compares a company’s Enterprise Value (EV) to its Earnings Before Interest, Taxes, Depreciation & Amortization (EBITDA). The ratio is commonly used as a valuation metric to compare the relative value of different businesses within the same sector. It tells investors how many multiple of EBITDA they must pay, were they to acquire the entire business.

Amazon.com Inc’s EV/EBITDA increased slightly from 2021 to 2022 (22.33x to 21.01x) as the enterprise value of the company increased.