**Financial Health Analysis of Amazon.com, Inc. (2020-2022)**

This report provides an overview of Amazon’s financial performance from 2020 to 2022 based on key financial ratios covering liquidity, profitability, solvency, asset utilization, and investor/market metrics. The analysis highlights the company's ability to sustain operations, generate profits, manage debt, and deliver value to shareholders.

***Liquidity***

Amazon's liquidity position weakened from 2020 to 2022, as indicated by several key ratios.

**Current Ratio**: The current ratio dropped from 1.14 in 2021 to 0.94 in 2022, below the 1.0 threshold. This indicates a growing strain on Amazon’s ability to cover short-term liabilities using current assets. The decline suggests Amazon’s increasing reliance on short-term financing to manage operations.

 **Quick Ratio**: Similarly, the quick ratio fell from 0.91 in 2021 to 0.72 in 2022, indicating reduced coverage of short-term liabilities excluding inventory. This reflects the increased pressure on cash and receivables to meet immediate obligations.

**Defensive Interval**: The defensive interval also dropped sharply from 109.49 days in 2020 to 81.76 days in 2022, signaling that Amazon has fewer days of cash and equivalents to cover daily expenses without relying on additional revenue.

Overall, Amazon’s liquidity ratios highlight a declining ability to meet short-term obligations, raising concerns about the company’s working capital management, particularly with a negative working capital figure of $-8.6 billion in 2022.

***Profitability***

Amazon's profitability ratios display a mixed trend over the three-year period.

**Gross Margin**: Amazon’s gross margin improved from 39.57% in 2020 to 43.81% in 2022, driven by the growth of high-margin businesses like Amazon Web Services (AWS). This reflects strong revenue generation relative to the cost of goods sold.

**EBITDA Margin**: The EBITDA margin rose consistently, reaching 105.77% in 2022, indicating enhanced operational efficiency and robust earnings before interest, tax, depreciation, and amortization. This was supported by Amazon’s continuous investment in technology and infrastructure.

**Net Margin**: The net margin, however, declined drastically from 7.10% in 2021 to -0.53% in 2022, signifying that Amazon faced challenges in converting revenues into net income. Rising operational costs, inflationary pressures, and substantial investments negatively impacted profitability, culminating in a net loss in 2022.

Amazon's gross and EBITDA margins indicate strong operational performance, but the sharp decline in net margin raises concerns about its ability to sustain profit growth amid rising costs.

***Solvency***

Solvency ratios show that Amazon’s debt levels increased between 2020 and 2022, placing more reliance on debt financing.

**Debt to Equity (D/E)**: The D/E ratio increased from 34.06% in 2020 to 45.98% in 2022, reflecting Amazon's increased use of debt to finance its rapid expansion. The rise suggests that Amazon is increasingly leveraging its capital structure, potentially exposing the company to higher interest and repayment risks.

**Long-term Debt to Capital**: This ratio rose from 25.41% in 2020 to 31.50% in 2022, further indicating that a larger portion of Amazon’s capital is financed through long-term debt.

**Times Interest Earned (TIE)**: The TIE ratio deteriorated significantly from -13.90 in 2020 to -5.17 in 2022, reflecting Amazon's decreasing ability to cover interest expenses with operating income, which is concerning given the rising debt levels.

While Amazon's ability to raise and manage debt is evident, the increasing reliance on debt financing and declining interest coverage pose potential solvency risks in the long term.

***Asset Utilization***

Amazon’s ability to utilize its assets to generate revenue also experienced some decline.

**Asset Turnover**: The total asset turnover ratio decreased from 31.67% in 2021 to 29.10% in 2022, indicating a reduction in the efficiency with which Amazon converts its assets into revenue.

**Fixed Asset Turnover**: Similarly, the fixed asset turnover ratio dropped from 85.92% in 2021 to 74.06% in 2022, suggesting that Amazon’s extensive investments in property, plants, and equipment are not generating as much revenue as before.

**Inventory Turnover**: The inventory turnover ratio also fell, from 241.29% in 2021 to 215.40% in 2022. This indicates that Amazon took longer to sell its inventory, which could be attributed to slower demand growth or inefficiencies in managing inventory amidst supply chain challenges.

These declining asset utilization ratios suggest that Amazon is not generating as much revenue relative to its growing asset base, potentially affecting its future profitability.

***Investor/Market Ratios***

The investor and market ratios paint a fluctuating picture of Amazon’s market value and attractiveness to investors.

**Price-to-Earnings (P/E) Ratio**: The P/E ratio fell from 49.48 in 2021 to -381.96 in 2022, reflecting negative earnings and a drop in market sentiment. This sharp decline highlights investor concerns regarding Amazon’s future profitability.

**Return on Equity (ROE)**: ROE dropped from 7.20% in 2021 to -0.48% in 2022, indicating that shareholders' equity is not being used effectively to generate returns, largely due to Amazon’s net loss in 2022.

**Enterprise Value to EBITDA (EV/EBITDA)**: The EV/EBITDA ratio decreased from 3.47 in 2021 to 1.96 in 2022, signaling that the company’s market value relative to its earnings has become more attractive, though this could also reflect reduced investor confidence.

***Conclusion***

Amazon’s financial health shows both strengths and weaknesses from 2020 to 2022. On the positive side, the company has maintained robust operational margins, driven by AWS and strategic investments. However, the declining liquidity, profitability challenges, increasing reliance on debt, and falling asset utilization raise concerns about the company’s ability to sustain growth in the short to medium term. Despite these challenges, Amazon remains a key player in the global market, though it will need to address rising costs, improve liquidity, and optimize its assets to ensure continued success.