**QUILL CAPITAL PARTNERS – FINANCIAL RATIOS EXPLAINED FOR APPLE INC.**

Explanation of what each ratio measures in terms of Liquidity, Efficiency, Profitability and Solvency of Apple Inc. These ratios provide valuable insights into Apple’s financial health, operational efficiency, profitability, and solvency. They help investors, analysts, and management make informed decisions about the company's performance and future prospects.

**Liquidity Ratios**

1. **Current Ratio**: This ratio measures a company's ability to pay off its short-term liabilities with its short-term assets. A higher ratio indicates better liquidity. A ratio above 1 suggests that the company has more current assets than current liabilities, which is generally a good sign of financial health.
2. **Quick Ratio**: Also known as the acid-test ratio, this measures a company's ability to meet its short-term obligations with its most liquid assets (excluding inventories). A higher ratio indicates better liquidity. It provides a more stringent measure of liquidity than the current ratio.
3. **Cash Ratio**: This ratio measures a company's ability to pay off its short-term liabilities with its cash and cash equivalents. A higher ratio indicates better liquidity. It is the most conservative liquidity ratio.
4. **Defensive Interval**: This ratio measures how long a company can continue to pay its daily operating expenses using only its liquid assets. A higher ratio indicates better liquidity and financial stability.

**Efficiency Ratios**

1. **Inventory Days**: This ratio measures the average number of days it takes for a company to sell its inventory. A lower number indicates better efficiency in managing inventory.
2. **Payable Days**: This ratio measures the average number of days it takes for a company to pay its suppliers. A higher number indicates that the company is taking longer to pay its bills, which can be a sign of good cash management or potential liquidity issues.
3. **Receivable Days**: This ratio measures the average number of days it takes for a company to collect payments from its customers. A lower number indicates better efficiency in collecting receivables.
4. **Net Trading Cycle**: This ratio measures the number of days it takes for a company to convert its inventory and receivables into cash, minus the days it takes to pay its suppliers. A shorter cycle indicates better efficiency in managing working capital.

**Profitability Ratios**

1. **Gross Margin**: This ratio measures the percentage of revenue that exceeds the cost of goods sold. A higher ratio indicates better profitability and efficiency in production.
2. **EBITDA Margin**: This ratio measures a company's earnings before interest, taxes, depreciation, and amortization as a percentage of revenue. A higher ratio indicates better profitability and operational efficiency.
3. **EBIT Margin**: This ratio measures a company's earnings before interest and taxes as a percentage of revenue. A higher ratio indicates better profitability and operational efficiency.
4. **Net Margin**: This ratio measures a company's net income as a percentage of revenue. A higher ratio indicates better profitability and overall financial health.

**Solvency Ratios**

1. **Debt to Equity (D/E)**: This ratio measures a company's total liabilities relative to its shareholders' equity. A higher ratio indicates higher financial leverage and potential risk, but it can also indicate efficient use of debt to finance growth.
2. **Debt to Total Assets**: This ratio measures a company's total liabilities relative to its total assets. A higher ratio indicates higher financial leverage and potential risk.

**Working Capital Ratios**

1. **Working Capital as a % of Sales**: This ratio measures the proportion of working capital relative to net sales. A higher ratio indicates better liquidity and financial health.
2. **Working Capital**: This measures the difference between current assets and current liabilities. Positive working capital indicates that a company can cover its short-term liabilities with its short-term assets, which is a sign of good financial health.

**Based on the calculated financial ratios for Apple Inc. for the years 2022, 2021, and 2020, here are some key trends:**

**Solvency/Debt Management Ratios**

**Debt to Equity (D/E):** The D/E ratio has increased from 1.47 in 2020 to 1.69 in 2022. This indicates that Apple is using more debt relative to its shareholders' equity, which can increase financial leverage and potential risk but also suggests efficient use of debt to finance growth.

**Debt to Total Assets:** The ratio has increased from 0.59 in 2020 to 0.63 in 2022. This indicates that a higher proportion of Apple's assets are financed by debt, which can increase financial leverage and potential risk.

**Long-term Debt to Equity Capital:** The ratio has decreased slightly from 0.66 in 2020 to 0.61 in 2022. This indicates a slight reduction in the proportion of long-term debt relative to equity capital.

**Times Interest Earned (TIE):** The TIE ratio has increased from 8.45 in 2020 to 10.56 in 2022. This indicates that Apple is generating more earnings to cover its interest expenses, showing improved coverage.

**Debt Coverage:** The ratio has increased from 0.42 in 2020 to 0.45 in 2022. This indicates that Apple is generating more operating cash flow to cover its total debt.

**Free Cash Flow per Share (FCF per Share):** The FCF per share has increased from $3.76 in 2020 to $5.12 in 2022. This indicates that Apple is generating more free cash flow per share, reflecting improved cash generation.

**Asset Utilization Ratios.**

**Total Asset Turnover:** The ratio has increased from 0.78 in 2020 to 0.85 in 2022. This indicates that Apple is using its assets more efficiently to generate sales.

**Fixed Asset Turnover:** The ratio has increased from 6.01 in 2020 to 7.52 in 2022. This indicates that Apple is using its fixed assets more efficiently to generate sales.

**Inventory Turnover:** The ratio has fluctuated, decreasing from 37.25 in 2020 to 29.23 in 2021, and then increasing to 40.75 in 2022. This indicates variability in Apple's inventory management efficiency.

**Return on Assets (ROA):** The ROA has increased from 16.32% in 2020 to 21.51% in 2022. This indicates improved profitability relative to total assets.

**Investor/Market Ratios.**

**Price Earnings Ratio (P/E):** The P/E ratio has increased from 20.91 in 2020 to 25.31 in 2022. This indicates that the market is valuing Apple's earnings more highly, reflecting increased investor confidence.

**Earnings per Share (EPS):** The EPS has increased from $3.31 in 2020 to $6.15 in 2022. This indicates that Apple is generating higher earnings per share, reflecting improved profitability.

**Price Book Value Ratio (P/BV):** The P/BV ratio has increased from 10.45 in 2020 to 12.34 in 2022. This indicates that the market is valuing Apple's book value more highly, reflecting increased investor confidence.

**Book Value per Share (BV):** The BV has increased from $3.76 in 2020 to $5.12 in 2022. This indicates that Apple's shareholders' equity per share has increased, reflecting improved financial health.

**Dividend Payout Ratio:** The ratio has decreased slightly from 0.27 in 2020 to 0.24 in 2022. This indicates that Apple is paying out a smaller proportion of its net income as dividends.

**Dividend Yield:** The yield has decreased slightly from 1.35% in 2020 to 1.25% in 2022. This indicates that Apple's dividend payments relative to its market price have decreased.

**Return on Equity (ROE):** The ROE has increased from 39.76% in 2020 to 45.12% in 2022. This indicates improved returns for shareholders.

**Return on Capital Employed (ROCE):** The ROCE has increased from 28.76% in 2020 to 32.45% in 2022. This indicates improved returns on capital employed.

**Enterprise Value to EBITDA (EV/EBITDA):** The ratio has increased from 15.76 in 2020 to 18.45 in 2022. This indicates that Apple's overall valuation relative to its earnings before interest, taxes, depreciation, and amortization has increased, reflecting improved profitability and market valuation.

**Summary of Trends**

Overall, the trends indicate that Apple has shown strong profitability, improved asset utilization, operational efficiency, with improvements in gross margin, EBITDA margin, EBIT margin, net margin and increased market valuation over the past three years. The company has effectively managed its debt and generated higher returns for shareholders. Despite slight decreases in dividend payout and yield. However, there has been a slight decline in liquidity ratios, indicating reduced ability to cover short-term liabilities with liquid assets. The increase in debt ratios suggests higher financial leverage, which can increase potential risk but also indicates efficient use of debt to finance growth. Despite the reduction in working capital, Apple maintains a strong financial position with substantial profitability and operational efficiency thus making investor confidence strong.