

The NDH Group, Ltd.

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Overview & Objective – The accompanying definitions for financial performance ratios have been considered for use in our CFO outsource engagements. While there is no definitive list of ratios or an authoritative text outlining their definition, these are generally accepted industry ratios/calculations with our own emphasis added for use in implementations.

Financial Performance Ratios

| Category | Definition |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity or Efficiency | Measure a company's ability to manage its most significant Balance Sheet accounts, which ultimately impact cash flow. They are particularly useful for managing internal operations. |
| Liquidity | Measure a company's short-term (a year or less in maturity) assets vs. liabilities, with more stringent ratios considering only cash or marketable securities. Liquidity ratios are often cited in lending covenants. |
| Solvency | Measure a company's long-term (greater than one year) liabilities vs. their ability to service them with either available equity or earnings from operations. Solvency ratios are often cited in lending covenants. |
| Profitability | Considers both simple profit ratios and company's profits against assets or equity. Since both utilize accrual profit measures, adjustments must be made to determine the actual cash flows arising from such profits. |
| Valuation | Measures a company's ability to make returns on invested capital and sustain future growth. These ratios are subjective, and typically considered in the context of publically traded companies where equity structures are more permanent. |

Averaging Balance Sheet Amounts – When Income Statement amounts represent the *numerator* of a ratio, and Balance Sheet amounts represent a ratio's *denominator* the **Balance Sheet figure must be an average for the period**; this allows consistency between the two amounts (makes consistent the native P&L period of time and the BS point in time). As we have primarily chosen to evaluate ratios on a quarterly basis we are using Balance Sheet figures for the beginning and end of any quarter used in analysis.

Current Issues with Intacct Implementation – As of this writing, the following remain obstacles using the Intacct platform for ratio analysis and graphical presentation.

- Inability to Include Multiple Terms Within a Single Computational AGD** – Intacct's Computational Account Group Definitions (AGDs) provide only two operands –not multiple terms— within a single AGD. This requires breaking-down computations into single terms and then combining the terms to achieve the desired calculation.
- Deficiency in Performing Division** – Intacct's Computational ADGs cannot perform division when a *numerator* is less than 1 (a decimal). As a result of this deficiency, we reworked the inputs for such ratios as DOH, DSO, and DPO so that the *turnover ratios* are first computed as a *product* rather than a *quotient* (we later convert the product by using the reciprocal function (or $[1/x]$)).
- Output Error When Graphing Decimal Values of Statistical Accounts** – Intacct's graphs will output "1.0" for any statistical account value less than one (a decimal). There appears to be no workaround to this issue.

- **Activity or Efficiency Ratios** – Generally combine P & L amounts in the numerator with Balance Sheet amount in the denominator.

- **Inventory Turnover** – The higher the inventory turnover the shorter the period inventory is held.

$$\frac{\text{Cost of Goods Sold (COGS as per inventory)}}{\text{Average Inventory}}$$

- **Days of Inventory on Hand (DOH)** – The higher the DOH the longer the period inventory is held. More intuitive than the turnover ratio.

$$\frac{\text{Number of Days in the Period (for quarterly results use 91.3125)}}{\text{Inventory Turnover}}$$

- **Receivables Turnover** – The higher the receivables turnover the shorter the period receivables remain unpaid.

$$\frac{\text{Revenue}}{\text{Average Trade Receivables}}$$

- **Days of Receivables on Hand / Days of Sales Outstanding (DSO)** – The higher the DSO the longer receivables remain unpaid. More intuitive than the turnover ratio.

$$\frac{\text{Number of Days in the Period (for quarterly results use 91.3125)}}{\text{Receivables Turnover}}$$

- **Payables Turnover** – The higher the payables turnover the shorter the period payables remain unpaid.

$$\frac{\text{Purchases (generally considered inventory related purchases)}}{\text{Average Trade Payables}}$$

- **Days of Payables on Hand / Days of Payables Outstanding (DPO)** – The higher the DPO the longer payables remain unpaid. More intuitive than the turnover ratio.

$$\frac{\text{Number of Days in the Period (for quarterly results use 91.3125)}}{\text{Payables Turnover}}$$

- **Liquidity Ratios** – Both numerator and denominator are Balance Sheet amounts, with the cash conversion cycle a computation involving three efficiency ratios.

- **Current Ratio** – The higher the current ratio the greater the liquidity.

$$\frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

- **Quick Ratio** – The higher the quick ratio the greater the liquidity.

$$\frac{\text{Cash + ST Marketable Securities + A/R: Trade}}{\text{Total Current Liabilities}}$$

- **Cash Ratio** – The higher the cash ratio the greater the liquidity.

$$\frac{\text{Cash + ST Marketable Securities}}{\text{Total Current Liabilities}}$$

- **Cash Conversion Cycle or Net Operating Cycle** – A measure of the time from paying suppliers for materials to collecting cash from the subsequent sale of goods produced from these materials.

$$\text{Days of Inventory (DOH) + Days of Receivables (DSO) – Days of Payables (DPO)}$$

- **Solvency Ratios** – The first subset of solvency ratios –*debt ratios*—utilize Balance Sheet amounts in both the numerator and denominator. The second set –*coverage ratios*—use P & L measures in both the numerator and denominator.

Debt Ratios

- **Debt-to-Equity** – The higher the ratio the greater the company's leverage or potentially the less solvent the company is.

$$\frac{\text{Total Debt (both short-term and long-term debt, but excludes A/P and accruals)}}{\text{Total Shareholders' Equity}}$$

- **Financial Leverage** – The higher the ratio the greater the leverage the company has employed or potentially the less solvent the company is.

$$\frac{\text{Average Total Assets}}{\text{Average Total Equity}}$$

Coverage Ratios

- **Interest Coverage** – The higher the ratio the more solvent the company, or a higher figure suggests a company's ability to meet its interest obligations.

$$\frac{\text{Earnings Before Interest and Taxes (EBIT)}}{\text{Interest Payments}}$$

- **Profitability Ratios** – The first subset of profitability ratios –*return on sales*—utilize P & L measures in both the numerator and denominator. The second set –*return on investment*—use P & L measures in the numerator and Balance Sheet amounts in the denominator.

Return on Sales

- **Gross Profit, Net Profit, Pretax Margin, Etc.** – The higher the margin the greater the indication of profitability.

$$\frac{\text{Measure of Profitability}}{\text{Revenue}}$$

Return on Investment

- **Return on Assets** – The higher the ratio the greater the net income per listed assets or the higher the leverage on usable assets.

$$\frac{\text{Net Income}}{\text{Average Total Assets}}$$

- **Return on Equity (abridged calculation)** – The higher the ratio the greater the equity returns for stakeholders or measures the return earned on total equity capital.

$$\frac{\text{Net Income}}{\text{Average Total Equity}}$$

- **Valuation Ratios** – Here, we focus dividend-related ratios, which attempt to capture both the amounts of dividends (or distributions) paid compared to the earnings and the affects of retention.

Dividend-Related

- **Retention Rate** – The higher the ratio the more profits are being retained by the firm.

$$\frac{\text{Net Income to Common Shareholders} - \text{Common Shareholder Dividends}^*}{\text{Net Income to Common Shareholders}}$$

*Note: Distributions can replace dividends. Also, for most pass-through entities there's a single class of stakeholder and therefore no deduction for preferred dividends.

- **Sustainable Growth Rate** – The higher the ratio the greater the estimated future growth or provides a predictive measure of growth consistent with retained profits. Measurement is in percentage terms.

$$\text{Retention Rate} * \text{Return on Equity}$$