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TABLE 1 A Summary of Key Financial Ratios, How They Are Calculated, and What They Show

Ratio	How Calculated	What It Shows
Profitability Ratios		
1. Gross profit margin	$\frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$	An indication of the total margin available to cover operating expenses and yield a profit.
2. Operating profit margin (or return on sales)	$\frac{\text{Profits before taxes and before interest}}{\text{Sales}}$	An indication of the firm's profitability from current operations without regard to the interest charges accruing from the capital structure.
3. Net profit margin (or net return on sales)	$\frac{\text{Profits after taxes}}{\text{Sales}}$	Shows after tax profits per dollar of sales. Subpar profit margins indicate that the firm's sales prices are relatively low or that costs are relatively high, or both.
4. Return on total assets	$\frac{\text{Profits after taxes}}{\text{Total assets}}$ or $\frac{\text{Profits after taxes + interest}}{\text{Total assets}}$	A measure of the return on total investment in the enterprise. It is sometimes desirable to add interest to aftertax profits to form the numerator of the ratio since total assets are financed by creditors as well as by stockholders; hence, it is accurate to measure the productivity of assets by the returns provided to both classes of investors.
5. Return on stockholder's equity (or return on net worth)	$\frac{\text{Profits after taxes}}{\text{Total stockholders' equity}}$	A measure of the rate of return on stockholders' investment in the enterprise.
6. Return on common equity	$\frac{\text{Profits after taxes} - \text{Preferred stock dividends}}{\text{Total stockholders' equity} - \text{Par value of preferred stock}}$	A measure of the rate of return on the investment which the owners of the common stock have made in the enterprise.
7. Earnings per share	$\frac{\text{Profits after taxes} - \text{Preferred stock dividends}}{\text{Number of shares of common stock outstanding}}$	Shows the earnings available to the owners of each share of common stock.
Liquidity Ratios		
1. Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Indicates the extent to which the claims of short-term creditors are covered by assets that are expected to be converted to cash in a period roughly corresponding to the maturity of the liabilities.
2. Quick ratio (or acid-test ratio)	$\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$	A measure of the firm's ability to pay off short-term obligations without relying on the sale of its inventories
3. Inventory to net working capital	$\frac{\text{Inventory}}{\text{Current assets} - \text{Current liabilities}}$	A measure of the extent to which the firm's working capital is tied up in inventory.
Leverage Ratios		
1. Debt-to-assets ratio	$\frac{\text{Total debt}}{\text{Total assets}}$	Measures the extent to which borrowed funds have been used to finance the firm's operations.
2. Debt-to-equity ratio	$\frac{\text{Total debt}}{\text{Total stockholders' equity}}$	Provides another measure of the funds provided by creditors versus the funds provided by owners.

Ratio	How Calculated	What It Shows
Leverage Ratios (*cont.*)		
3. Long-term debt-to equity ratio	$\frac{\text{Long-term debt}}{\text{Total shareholders' equity}}$	A widely used measure of the balance betwee debt and equity in the firm's long-term capit structure.
4. Times-interest-earned (or coverage) ratio	$\frac{\text{Profits before interest and taxes}}{\text{Total interest charges}}$	Measures the extent to which earnings can decline without the firm becoming unable to meet its annual interest costs.
5. Fixed-charge coverage	$\frac{\text{Profits before taxes and interest + Lease obligations}}{\text{Total interest charges + Lease obligations}}$	A more inclusive indication of the firm's ability meet all of its fixed-charge obligations.
Activity Ratios		
1. Inventory turnover	$\frac{\text{Sales}}{\text{Inventory of finished goods}}$	When compared to industry averages, it provid an indication of whether a company has excessive or perhaps inadequate finished goods inventory.
2. Fixed assets turnover	$\frac{\text{Sales}}{\text{Fixed Assets}}$	A measure of the sales productivity and utilization of plant and equipment.
3. Total assets turnover	$\frac{\text{Sales}}{\text{Total Assets}}$	A measure of the utilization of all the firm's assets; a ratio below the industry average indicates the company is not generating a sufficient volume of business, given the size its asset investment.
4. Accounts receivable turnover	$\frac{\text{Annual credit sales}}{\text{Accounts receivable}}$	A measure of the average length of time it takes the firm to collect the sales made on credit.
5. Average collection period	$\frac{\text{Accounts receivable}}{\text{Total sales} \div 365}$ or $\frac{\text{Accounts receivable}}{\text{Average daily sales}}$	Indicates the average length of time the firm must wait after making a sale before it receives payment.
Other Ratios		
1. Dividend yield on common stock	$\frac{\text{Annual dividends per share}}{\text{Current market price per share}}$	A measure of the return to owners received in th form of dividends.
2. Price-earnings ratio	$\frac{\text{Current market price per share}}{\text{After tax earnings per share}}$	Faster-growing or less-risky firms tend to have higher price-earnings ratios than slower-growing or more-risky firms.
3. Dividend payout ratio	$\frac{\text{Annual dividends per share}}{\text{After tax earnings per share}}$	Indicates the percentage of profits paid out as dividends.
4. Cash flow per share	$\frac{\text{After tax profits + Depreciation}}{\text{Number of common shares outstanding}}$	A measure of the discretionary funds over and above expenses that are available for use by the firm.

OPERATING CAPITAL

1. TOTAL TRADING CYCLE - ESTIMATED NUMBER OF DAYS FROM DATE OF PURCHASE OF MATERIALS TO BE SOLD TO THE DATE OF THE COLLECTION FOR SALES MADE.

TTC = CASH + RECEIVABLE S+ INVENTORY//AVERAGE SALES PER DAY

2. NET CASH CYCLE - NUMBER OF DAYS THAT CASH IS TIED UP IN CONDUCTING BUSINESS

NCC = TTC - PAYABLES/ASPD

DEGREE OF OPERATING CASH LEVERAGE

THE DOLLAR AMOUNT OF ADDITIONAL SALES REQUIRED TO PUT A DOLLAR OF CASH "IN THE BANK."

DOCL = S//[S-V-(CE+A/R+I-A/P)][1-T]

WHERE:

S = TOTAL SALES

V = VARIABLE COSTS

CE = CASH & EQUIVALENTS

A/R = ACCOUNTS RECEIVABLE

I = INVENTORY

A/P = ACCOUNTS PAYABLE

T = INCOME TAX RATE

STRATEGIC PROFIT MODEL (AKA THE DU PONT CHART)

RATE OF RETURN ON NET WORTH =

NET PROFIT MARGIN = NET PROFIT BEFORE TAX//NET SALES X

RATE OF ASSET TURNOVER = NET SALES//TOTAL ASSETS X

LEVERAGE RATIO = TOTAL ASSETS//NET WORTH

RORNW = NPM X RATO X LR = NPM//NET WORTH

INDEX OF SUSTAINABLE GROWTH (G*)

IF THE PLANNED GROWTH RATE OF SALES EXCEEDS G*, THEN EXTERNAL CAPITAL MUST BE SOUGHT TO FUND THE DESIRED GROWTH RATE.

G* = [P(1-D)(1+L)//T-P(1-D)(1+L)] X 100

WHERE:

P = (NET PROFIT BEFORE TAX//NET SALES) X 100

D = TARGET DIVIDENDS//PROFIT AFTER TAX

L = TOTAL LIABILITIES//NET WORTH

T = (TOTAL ASSETS//NET SALES) X 100

BANKRUPTCY PREDICTION
(AKA ALTMAN'S Z - SCORE)

Z =1.2X1 + 1.4X2 + .6X4 + 1.0X5 + 3.3X3

WHERE:

X1 = (CURRENT ASSETS - CURRENT LIABILITIES)//TOTAL ASSETS

X2 = RETAINED EARNING//TA

X4 = MARKET VALUE OF
EQUITY//TOTAL LIABILITY

X5 = NET SALES//TA

X3 = EARNINGS BEFORE TAXES +
INTEREST//TA

STRATEGIC FUNDS PROGRAMMING

INTERNAL SOURCES =

PROFIT AFTER TAXES - DIVIDENDS + RETAINED EARNINGS + DEPRECIATION + OTHER NON-CASH EXPENSES = CASH FLOW FROM OPERATIONS

AUGMENTED DEBT =

RETAINED EARNINGS X CURRENT TOTAL DEBT-TO EQUITY RATIO =

FUNDS FROM WITHIN CURRENT STRUCTURE

EXPANDED DEBT CAPACITY =

NEWLY NEGOTIATED LONG-TERM DEBT/EQUITY RATIO - CURRENT LONG-TERM DEBT/EQUITY RATIO = (UNUSED DEBT FACTOR) X SHAREHOLDERS EQUITY = EXPANDED DEBT CAPACITY

TOTAL FUNDS AVAILABLE (MAXIMUM) = CASH FLOW FROM OPERATIONS + FUNDS FROM WITHIN CURRENT STRUCTURE + EXPANDED DEBT CAPACITY