**Formula Sheet**

Total Assets = Total Liabilities + Total Equity

Stockholders’ equity = Paid-in capital + Retained earning

Total debt = Short-term debt + Long-term debt

Total liabilities = Total debt + (Accounts payable + Accruals)

EPS (Earnings Per Share) = Net income / common shares outstanding

DPS = Dividend paid to common shareholders / common shares outstanding

Book value per share = Total common equity / common shares outstanding

Market price per share = Total market value / common shares outstanding

Net cash flow = Net income + Depreciation and Amortization

Net working capital = Current Assets – Current liabilities

Net Operating working capital (NOWC)

= (Current Assets – Excess Cash) – (Accounts Payable + Accruals)

= (Current Assets – Excess Cash) – (Current Liabilities – Notes Payable)

After tax operating income (NOPAT) = EBIT(1-Tax rate)

Operating cash flow = NOPAT + Depreciation and Amortization

MVA = Difference between market value and book value of a firm’s common equity

= P0 x Number of shares – Book value

EVA = Net operating profit after taxes (NOPAT) - Annual dollar cost of capital

= EBIT(1–T) - Total invested capital\*After-tax percentage cost of capital(WACC)

Free Cash Flow (FCF)

= Operating Cash Flow – Gross investment in operating capital

= (NOPAT + D&A) – [Capital expenditure + Δ NOWC]

= (NOPAT + D&A) – [Δ Gross Fixed Assets + Δ NOWC]

Current ratio = current assets / current liabilities

Quick ratio = (current assets – inventories) / current liabilities

Inventory turnover ratio = Cogs/ inventories OR Sales / Inventories

Days sales outstanding (DSO) = accounts receivable / (annual sales/365))

Fixed assets turnover ratio = sales / net fixed assets

Total assets turnover ratio = sales / total assets

Debt-to-capital ratio = total debt / total invested capital

Times-interest-earned ratio (TIE) = EBIT / interest charges

Operating margin = EBIT / sales

Profit margin = net income / sales

Basic earning power ratio (BEP) = EBIT / total assets

Return on total assets (ROA) = net income / total assets

Return on common equity (ROE) = net income / common equity

Return on invested capital (ROIC) = EBIT(1-T) / total invested capital

Price/earnings ratio (P/E) = price per share / earnings per share

Market/book ratio (M/B) = market price per share / book value per share

EV/EBITDA = (MVE + MVD +MVClaims – Cash and Equivalents)/EBITDA

DuPont equation:

ROE = ROA \* equity multiplier

= Profit margin \* Total assets turnover \* Equity multiplier

Equity multiplier = Total assets / Total common equity

Beta = covariance / variance

= stock st. dev. of returns / market st. dev. of returns

i.e. = slope of

IBM Weekly Close (y) and S&P500 Weekly Close (x)