**FIN 440 LECTURE 4**

**FINANCIAL RATIO ANALYSIS**

**CHAPTER REFERENCE – CHP 3**

**LIQUIDITY RATIOS**

* 1. Current Ratio = Current Asset / Current Liability (x or %)
  2. Quick Ratio = (Current Asset - Inventory) / Current Liability (x or %)
  3. NWC to TA ratio = NWC/TA (x or %)
  4. Cash Ratio = (Cash + Marketable Securities)/CL (x or %)
  5. Interval Measure = (Cash + Mkt Sec + A/R) / Avg Daily Expenses (days)
  6. Average Daily Expenses = (COGS + Admin. Exp + Operating Expenses) / 360 ($/day)
  7. Gross Working Capital = Current Assets ($)
  8. Net Working Capital = CA - CL ($)
  9. Payables Deferral Period = (Average A/P) / Daily Sales or Daily COGS (days)
  10. Daily Expenses = (COGS + Other Expenses) / 360 (TK)
  11. CCC = (Inv/Daily COGS) + (Rec/ Daily Credit Sales) – (A/P/ Daily Expenses)

**ACTIVITY RATIOS**

* + - 1. Inventory Turnover Ratio = Sales / Inventory (x)
      2. Inventory Turnover Period = 360 / Inventory Turnover Ratio (day or Inv / Daily Sales)
      3. Daily Sales = sales / 360 ($/day)
      4. Receivable Turnover Ratio = Sales / Receivables
      5. Daily Sales Outstanding = Accounts Receivable / Daily sales (day)
      6. Daily Sales Outstanding = 360 / (Sales / Receivables) = Receivables / Daily Sales (day)
      7. Daily Sales Outstanding = 360 / Receivables Turnover Ratio (day)
      8. Fixed Asset Turnover Ratio = Sales / Avg Fixed Asset (x)
      9. Fixed Asset Turnover Period = 360 / Fixed Asset Turnover Ratio (day or Avg. FA / DS)
      10. Total Asset Turnover Ratio = Sales / Avg Total Asset (x)
      11. Total Asset Turnover Period = 360 / Total Asset Turnover Ratio (day)
      12. Capital Intensity Ratio = Fixed Asset / Total Asset (x or %)
      13. Current Asset Intensity Ratio = Current Asset / Total Asset (x or %)
      14. Total Asset Turnover Ratio = Sales / Average TA (x or %)
      15. Fixed Asset Turnover Ratio = Sales / Avg Fixed Asset (x or %)
      16. NWC Turnover Ratio = Sales / Avg. NWC (x or %)
      17. Inventory Turnover Ratio = COGS / Avg Inventory (x or %)
      18. Days Sales in Inventory or Inventory Turnover Period = Average Inventory / Daily COGS (days)

**DEBT RATIOS**

* + - * 1. Debt Ratio = Total Debt / Total Asset (x or %)
        2. Long Term Debt Ratio = Long Term Debt / Total Asset (x or %)
        3. Long Term Debt to Debt Ratio = Long Term Debt / Total Liability (x or %)
        4. Debt Equity Ratio = Long Term Debt / Total Equity (x or %)
        5. Debt Equity Ratio = Total Liability / Total Equity (x or %)
        6. TIE Ratio = EBIT / Interest Charges (x or %)
        7. Fixed payment Coverage Ratio = (EBIT + Lease Payment) /{Interest +[Sinking Fund /(1 - Tax Rate)]} (x or %)
        8. Cash Coverage Ratio = (EBIT + Dep.) /Interest

**PROFITABILITY RATIOS**

* + - * 1. Profit Margin = Net Income / Sales (x or %)
        2. Basic Earning Power (BEP) = EBIT / TA (x or %)
        3. Return on Asset = Net Income / Total Asset (x or %)
        4. Return on Asset = (Net Income+ Interest) / (Debt+Equity)
        5. Return on Asset = (Net Income+ Interest) / Total Assets
        6. Return On Equity = Net Income / Total Equity (x or %)
        7. WACC = [{Debt(1-Tax)/(Debt+Equity)}\*Rd] + [{Equity/(Debt+ Equity)}\* Re] (rd = min req rate, re = cost of equity )

The CAPM

* + - * 1. Payout Ratio (POR) = Dividend / Earning (%)
        2. Plowback Ratio = 1 - POR = (Earning - Div)/Earning (%)

**MARKET RATIOS**

1. Earning Per Share = Net Income / Shares Outstanding ($/share)
2. Price = Price per Share (Tk/share)
3. Book Value per Share (BVPS) = Total Equity / SOS ($/share)
4. Market / Book = Market Price / BVPS (x or %)
5. Market Value = Price \* SOS ($)
6. Book Value = Total Equity ($)
7. Price / Earning Ratio = market price per share / EPS (x)

**The DUPONT MODEL**

