

McGill Investment Club

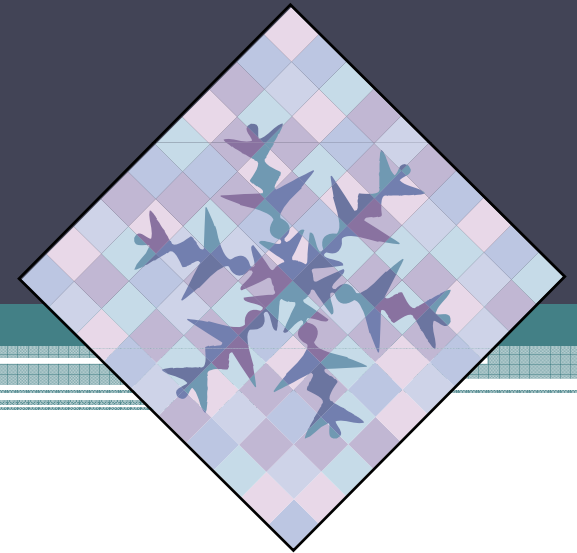
Stock Analyst Program (SAP)

Winter Edition - 1st Meeting

January 23, 2008

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With contributions by Annie Deng



Agenda

- Objective
- Industry Selection
- Stock Report
- Timeline
- Techniques for Analysis
 - Valuation Overview (Discounted Cash Flow)
 - Ratio Analysis
- Q&A

Objective

- The goal of the Stock Analyst Program is to generate a valuable learning experience, as well as select different stocks to invest in for the Club's portfolio
- 1 or 2 recommendation(s) will be the MIC's pick



There will be two components...

- 1) Stock Report
- 2) Final Team Presentation (8-10 minutes)

Industry Selection

- Financial Institutions
- Media & Telecom
- Energy
- Consumer Non-Cyclical
- Industrials
- Transportation
- Utilities
- Healthcare
- Retail Products
- Investment Trusts
- REITs

Stock Report

- **Examples** of past SAP reports are online:
www.mcgillinvestmentclub.com
 - Click on “Resources” --> Click the “SAP Reports” Tab
- Analysis on **one stock** and place a **buy, hold, or sell rating**
- Recommended format:
 - **Company Profile**
 - **Industry Analysis**
 - **Future Outlook: Opportunities and Risks**
 - **Stock Valuation**
 - **Target Price Range**
 - **Recommendation**

Stock Report

- Suggestions:
 - Quality of earnings – profitable company...
 - Growth prospects – sales, earnings, margins...
 - Well positioned vs. competitors
 - Risk analysis

Deadlines & Timeline

- TBD:
Stock Selection Submission
 - Submit a list of **3 stocks** that you would like to analyze and why
 - E-mail to louis-philippe.edger@mail.mcgill.ca
 - **MIC Approval:** you will receive an e-mail confirming your selection
- TBD:
SAP Mid-point meeting
6pm
 - Update on report progress
 - We are here to answer your questions

Deadlines & Timeline

- Monday, March 24:
 - Report Submission by email
- Wednesday, March 26:
FINAL PRESENTATION
Room TBD @ 6pm
 - **8-10 Minute** Team Presentation with Recommendation
 - Q&A
 - Sell/Buy Decision by MIC

Techniques for Analysis: DCF

Discounted Cash Flow (DCF)

- DCF is the method of valuation that allows for the most flexibility (and possibly precision) in coming up with the **intrinsic** value of a firm
 - The DCF method that we use is **FCFF (Free Cash Flow to the Firm)**
- Mapped on many assumptions
- Based on future expectations of a firm's cash flows (numerator), and the risks associated with those cash flows (denominator)

DCF - Basic Steps

- First determine WACC (Weighted Average Cost of Capital)
 - $WACC = D/V * R_d (1-T) + E/V * R_e$
 - Take into account the effect of capital structure
 - Use target (optimal) D/E ratio
 - To find R_e , you can use the Capital Asset Pricing Model (CAPM)
 - $R_e = R_f + \beta (R_m - R_f)$
- Mechanics of FCFF
 - $FCFF = EBIT(1-T) - CAPEX + NCC +/- \Delta NWC$
 - CAPEX and NWC are all cash sources/uses that don't affect EBIT, therefore we must adjust for them to arrive at FCFF

DCF – Basic Steps (cont'd)

- Analyze historical performance to come up with future set of assumptions (COGS, SG&A, R&D, “DEP”, “CAPEX”, “NWC” as a % sales)
 - Therefore, you could use revenue as a driver, and determine its growth from year to year during our **explicit forecast period (5-10 yrs)**
- Determine FCFF's each year using assumptions driven off of revenue
- Determine **Terminal Value (TV)** at last year of forecast period
 - 2 methods
 - Growing perpetuity
 - Assumes constant growth rate (2-3%)
 - Terminal multiple
 - Assumes an exit multiple of an operating metric like EBITDA or FCFF, to determine a value for the enterprise at that point in time

DCF - Basic Steps (cont'd)

- Bring everything back to present value at WACC
- Now we have the value of the enterprise
(Enterprise Value = Net Debt + Equity + Minority Interest)
- In order to determine **Equity value**, we must first subtract Net Debt & Minority Interest
- At this point we have Equity Value
 - Divide by number of **Shares Outstanding** to obtain Price Per Share
- **Compare with share price in market**

Techniques for Analysis: IMPORTANT RATIOS

- $EPS = \text{NET INCOME} / \text{SHARES OUSTANDING}$
- $P/E = \text{STOCK PRICE} / \text{EPS}$
- $\text{OPERATING MARGIN} = \text{OPERATING INCOME} / \text{TOTAL SALES}$
- $ROA = \text{EBIT} / \text{TOTAL ASSETS}$
- $ROE = \text{N.I.-PREF. DIV.} / \text{S. EQUITY}$
- $\text{CASH/PRICE} = \text{FREE CASH FLOW} / \text{STOCK PRICE}$

IMPORTANT RATIOS CON'T...

- $A/R \text{ TURNOVER} = \text{SALES ON ACCOUNT} / \text{AVERAGE SALES}$
- $\text{INVENTORY TURNOVER} = \text{COGS} / \text{AV. INV.}$
- $\text{TIMES INTEREST EARNING} = \text{EBIT} / \text{INT.}$
- $\text{CURRENT RATIO} = \text{CURRENT ASSET} / \text{CURRENT LIABILITY}$
- $\text{OPERATING CASH FLOW TO SHORT TERM LIQUIDITY} = \text{CASH FLOW} / \text{CURRENT MATURITIES}$

Q&A

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- *ENJOY THE PROCESS!*