

Lecture 7: Company Analysis

- Today's Questions

- Which are the best companies?
- Are the best companies always the best investments?
- How to determine the intrinsic value of a company?
- The intrinsic value of an asset
 - usually refers to a value calculated on simplified assumptions.
 - is a measure of what an asset is worth.

Company Analysis Vs Stock Valuation

- Good companies are not necessarily good investments
- Compare the intrinsic value of a stock to its market value
- Stock of a great company may be overpriced
- Stock of a growth company may not be growth stock

Growth Companies & Growth Stocks

- Growth Companies

- Historically, consistently experience above-average increases in sales & earnings.
- Theoretically, yield rates of return greater than the firm's required rate of return.

- Growth Stocks

- NOT necessarily the stocks of growth companies
- A growth stock has a higher rate of return than other stocks with similar risk.
- Superior risk-adjusted rate of return occurs because of market undervaluation compared to other stocks.

Defensive Companies & Stocks

• Defensive Companies

- The firms whose future earnings are more likely to withstand an economic downturn.
- Low business risk
- No excessive financial risk
- Typical examples are:
 - public utilities or grocery chains - firms that supply basic consumer necessities.

• Defense Stocks

- The rate of return is not expected to decline, or decline less than the overall market decline.
- Stocks with low or negative systematic risk (beta)

Cyclical Companies & Stocks

• Cyclical Companies

- They are the companies whose sales & earnings will be heavily influenced by aggregate business activity.

Example: firms in the steel, auto, or heavy machinery industries

• Cyclical Stocks

- They will have greater changes in rates of return than the overall market rates of return.
- They would be stocks that have high betas

Speculative Companies & Stocks

• Speculative Companies

- They are the firms whose assets involve great risk but those that also have a possibility of great gain.

Example: one involved in oil exploration

• Speculative Stocks

- Stocks possess a high probability of low or negative rates of return & a low probability of normal or high rates of return, i.e,

Overpriced stocks

Example: an excellent growth company whose stock is selling at an extremely high P/E ratio.

Value Vs Growth Investing

- Growth stocks

- will have positive earnings surprises & above-average risk
- usually have high P/E ratio or low ratios of price to book value (because of rapid expected earnings growth)

- Value stocks

- appear to be undervalued for reasons besides earnings growth potential.
- usually have • low P/E ratio or • low ratios of price to book value

Economic, Industry, & Structural Links to Company Analysis

- Company analysis is the final step in the top-down approach to investing
- Macroeconomic analysis identifies industries expected to offer attractive returns in the expected future environment
- Analysis of firms in selected industries concentrates on a stock's **intrinsic value** based on growth & risk.

Economic & Industry Influences

- If trends are favorable for an industry
 - the company analysis should focus on firms in that industry that are positioned to benefit from ~~XXXXXX~~
 - the economic trends
- Firms with sales or earnings particularly sensitive to macroeconomic variables should also be considered
- Research analysts
 - need to be familiar with the cash flow & risk of the firms.

Structural Influences

- Social trends, technology, political, & regulatory influences
 - can have significant influence on firms

- Firms can grow & succeed despite unfavorable industry or economic conditions
 - due to demographic changes or shifts in consumer tastes & lifestyles
- Early stages in an industry's life cycle see changes in technology
 - which followers may imitate & benefit from
- Politics & regulatory events
 - can create opportunities even when economic influences are weak

Company Analysis: Qualitative

Company Analysis & Valuation

- Firm's Overall Strategic Approach
 - Industry competitive environment
 - SWOT analysis

- Strengths	- Opportunities
- Weaknesses	- Threats
- Firm's Valuation Approaches
 - Present value of cash flows
 - Relative valuation ratio techniques

Firm Competitive Strategies

- Defensive strategy
 - involves positioning firm so that its capabilities
 - provide the best means to deflect the effect of
 - competitive forces in the industry
- Offensive strategy
 - involves using the company's strengths
 - to affect the competitive industry forces,
 - thus improving the firm's relative industry position

Focusing a Strategy

- Select segments in the industry
- Tailor strategy to serve those specific groups
- Determine which strategy a firm is pursuing & its success
- Evaluate the firm's competitive strategy over time.

SWOT Analysis

• Internal Analysis

• Strengths

- Give the firm a comparative advantage in the marketplace
- Perceived strengths can include

- good customer service • customer loyalty
- high-quality products • innovative R&D
- strong brand image • market leadership or
strong financial resources

• Weaknesses

- Weaknesses result when competitors have potentially exploitable advantages over the firm.

• External Analysis

• Opportunities

- There are environmental factors that favor the firm
- They may include a growing market for the firm's products (domestic & international).
- shrinking competition
- favorable exchange rate shifts, or
- Identification of a new market or product segment

• Threats

- They are environmental factors that can hinder the firm in achieving its goals

Examples would include

- a slowing domestic economy,
- additional government regulation
- an increase in industry competition,
- threats of entry.

Company Analysis: Quantitative Analysis

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Estimating Intrinsic Value

- Present value of cash flows (PVCF)
 - Present value of dividends (DDM)
 - Present value of free cash flow to equity (FCFE)
 - Present value of free cash flow to firm (FCFF)
- Relative valuation techniques
 - Price earnings ratio (P/E)
 - Price cash flow ratios (P/CF)
 - Price book value ratios (P/BV)
 - Price sales ratio (P/S)

Present Value of Dividends (DDM)

- Recall the general DDM: $V = \sum_{t=1}^{\infty} \frac{D_t}{(1+k)^t}$

- Also recall the constant growth DDM:

$$V = \frac{D_1}{k-g} = \frac{D_0(1+g)}{k-g}$$

DDM: Estimates of g

- Growth Rate Estimates:
 - Average historical dividend growth rate

$$g = \sqrt[n]{\frac{D_n}{D_0}} - 1$$

- Sustainable Growth Rate

$$g = RR \times ROE$$

$$ROE = (\text{Net profit margin}) \times (\text{Total asset turnover}) \times (\text{Assets}/\text{Equity})$$

DDM: Estimates of k

- Required Rate of Return Estimate
 - Nominal risk-free interest rate
 - Risk premium
 - Market-based risk estimated from the firm's characteristic line using regression.

$$E(R_{stock}) = E(RFR) + \beta_{stock}[E(R_{market}) - E(RFR)]$$

DDM: Rapid growth

- Model requires $k > g$
- With $g > k$, analyst must use multi-stage model
- The 3-stage model example of the DDM approach in the book illustrates:
 - How to estimate the stock price experiences:
 - High growth at 13% for 3 years
 - Growth rate declining toward steady state by 1% per year for 6 years
 - Constant perpetual growth of 6%

Present Value of Free Cash Flow to Equity

- The Free cash flow to Equity (FCFE) is defined as.

Operating cash flow

$$FCFE = \underbrace{\text{Net Income} + \text{Depreciation}}_{\text{Operating cash flow}} - \Delta \text{ in non-cash working capital}$$

- Capital expenditures - Principal debt repayments
+ Net debt issues

$$FCFE = (EBIT - \text{Interest}) (1 - \text{Tax Rate}) + \text{Depreciation}$$

- Δ in non-cash working capital - Capital expenditures
- principal debt repayments + Net debt issues

- The Constant Growth Formula

$$\text{Value} = \frac{FCFE_1}{k - g_{FCFE}}$$

where;

- $FCFE$ = the expected free cash flow in period 1
- k = the required rate of return on equity for the firm
- g_{FCFE} = the expected constant growth rate of free cash flow to equity for the firm
- A multi-stage model similar to DDM can also be applied.

FCFE Vs Dividends

- FCFE measures how much the firm can afford to pay out to stockholders
- Dividends measure the amount actually paid out
- $FCFE > \text{Dividend}$:
 - Buildup of cash balances
 - Investment in market securities
 - Buyback of own stock (equity repurchases)
- $FCFE < \text{Dividend}$:
 - must be financed by new equity issues or depletion of existing balances
- (January 2013) average U.S. Dividend-to-FCFE ratio: 41%

P.V. of Operating Free Cash Flow / Free Cash Flow to the Firm

- Alternatively, we can measure the entire free cash flow available to the suppliers of capital to the firm (equity + debt)
 - This is known as $(FCFF)$
 - Free Cash Flow to the Firm ($FCFF$) or
 - Operating Free Cash Flow ($OFCF$)
- The value we compute using this measure is
 - the sum of the value of equity + the value of debt
- To find the value of equity, we subtract the value of outstanding debt

$$FCFF = EBIT(1 - \text{Tax Rate}) + \text{Depreciation} + \Delta \text{in non-cash working capital} - \text{Capital expenditures}$$

$$FCFE = FCFF - \text{Interest expense} * (1 - \text{tax}) + \text{Increase in debt}$$

Discounting of FCFF

- FCFF is discounted by the firm's weighted average cost of capital, WACC.

$$WACC = \frac{\text{Equity}}{\text{Equity} + \text{Debt}} K_E + \frac{\text{Debt}}{\text{Equity} + \text{Debt}} (1-t) r_D$$

where;

- K_E is the required rate of return on equity
- r_D is the pre-tax cost of (interest on) debt
- t is the applicable marginal corporate tax rate

P.V. of OCF / FCFF

- The Formula (assuming constant growth)

$$V_{\text{FIRM}} = \frac{FCFF_1}{WACC - g_{\text{FCFF}}}$$

where;

- $FCFF_1$ = the free cash flow in period 1
- $WACC$ = the firm's weighted average cost of capital
- g_{FCFF} = the constant growth rate of free cash flow

$$V_{\text{EQUITY}} = V_{\text{firm}} - V_{\text{debt}}$$

- An alternative measure of long-run growth

$$g = (\text{RR}) (\text{ROIC})$$

where;

RR = the average retention rate

ROIC (Return on Invested Capital)

$$\text{ROIC} = \text{EBIT}(1 - \text{TAX RATE}) / \text{Total Capital}$$

Relative Valuation Ratio Techniques

Estimating Company Earnings Per Share

- A Two-Step Process
 - Sales Forecast
 - It includes an analysis of the relationship of company sales to various relevant economic series
 - It also includes a comparison with the industry series
 - Estimated Profit Margin
 - Identification & evaluation of the firm's specific competitive strategy
 - The firm's internal performance
 - The firm's relationship with its industry

Walgreens Competitive Strategies

- The Internal Performance
 - Industry Factors - Net Profit Margin Estimate
 - Company Performance - Computing Earnings per Share
- Importance of Quarterly Estimates
 - A way to confirm our annual estimate
 - If the actual quarterly results are
 - a surprise relative to our estimate,
 - we will want to understand the reason for the surprise.

Estimating Company Earnings Multipliers

- Microanalysis of the Earnings Multiplier
 - Based on the theoretical relationship $\frac{P_1}{E_1} = \frac{D_1/E_1}{k-g}$
 - Estimate dividend-payout ratios
 - Estimate the required rate of return
 - Estimate the expected growth rate
 - Compute the earnings multiplier
 - Is a high P/E justified.

Additional Measures of Relative Value

- Price / Book Value Ratio

- Book Value is a reasonable measure of value for firms that have consistent accounting practices
- It can been applied to firms with negative earnings or cash flows
- should not attempt to use this ratio to compare firms with
 - different levels of hard assets
 - for example; a heavy industrial firm & a service firm

- Price / Cash Flow Ratio

- The price/cash flow ratio
 - has grown in prominence & use because many observers
 - contend that a firm's cash flow is less subject to manipulation.

- Price - to - Sales Ratio

- Sales growth drives the growth of all subsequent earnings
- & cash flow and sales is one of the purest numbers available

Analysis of Growth Companies

- Generating rates of return greater than the firm's cost of capital is considered to be temporary.
- Earnings higher the required rate of return are pure profits.
- How long can they earn these excess profits?
- Is the stock properly valued?
- Growth companies & the DDM
 - No growth firms
 - Long-run growth models.

Measures of Value-Added

- Economic Value-Added (EVA)

- It is equal to the net operating profit less adjusted taxes (NOPLAT)
- minus the firm's total cost of capital in dollar terms,
- including the cost of equity

- EVA Return on Capital

- EVA/Capital

- This ratio can compare firms on different sizes &
 - determine which firm has the largest economic profit per dollar of capita

- Alternative Measure of EVA

- Compare return on capital to cost of capital

- Market Value-Added (MVA)

- Measure of external performance.

$$\text{MVA} = \text{MV of Firm} - \text{Capital Invested} - \text{MV of Debt} - \text{MV of Equity}$$

- How the market has evaluated the firm's performance in terms of market value of debt &
 - market value of equity compared to the capital invested in the firm.

- Relationships between EVA & MVA

- mixed results.

Growth Duration Model

- The purpose is to evaluate the high P/E ratio

- for the stock of a growth company by relating its P/E ratio to the firm's rate of growth & duration of growth

- A stock's P/E is a function of

- expected rate of growth of earnings per share
 - stock's required rate of return
 - firm's dividend-payout ratio

- The growth estimate must consider both the rate of growth and how long this growth rate can be sustained
 - that is, the duration of the expected growth rate

Site Visits & the Art of the Interview

- Focus on management's plans, strategies, & concerns
- Restrictions on nonpublic information
- "What if" questions can help gauge sensitivity of revenues, costs, and earnings.
- Management may indicate appropriateness of earnings estimates
- Discuss the industry's major issues
- Review the planning process
- Talk to more than just the top managers

When to sell

- Holding a stock too long may lead to lower returns than expected
- If stocks decline right after purchase,
 - is that a further buying opportunity or
 - an indication of incorrect analysis?
- Continuously monitor key assumptions.
- Evaluate closely when market value approaches estimated intrinsic value
- Know why you bought it & watch for that to change.

Limitations for Analysts

- Efficient Markets
 - In most instances, the value estimated for a stock will be very close to its market price, which indicates that it is properly valued.
- Paralysis of Analysis
 - To earn above-average returns, there are 2 requirements:
 - 1) the analyst must have expectations that differ from consensus &
 - 2) the analyst must be correct
- Analyst Conflicts of Interest
 - A potential conflict can arise if communication occurs between a firm's investment banking & equity research division.