Economy/Market Analysis

Chapter 13

Charles P. Jones, Investments: Analysis and Management, Tenth Edition, John Wiley & Sons

Prepared by
G.D. Koppenhaver, Iowa State University

Top-down Approach

- Analyze economy-stock market ⇒ industries ⇒ individual companies
  - Need to understand economic factors that affect stock prices initially
  - Use valuation models applied to the overall market and consider how to forecast market changes
  - Stock market’s likely direction is of extreme importance to investors
  - Should also take a global perspective because of linkages

Economy and the Stock Market

- Direct relationship between the two
- Economic business cycle
  - Recurring pattern of aggregate economic expansion and contraction
  - Cycles have a common framework
    - trough $\Rightarrow$ peak $\Rightarrow$ trough
  - Can only be neatly categorized by length and turning points in hindsight

Business Cycle

- National Bureau Economic Research
  - Monitors economic indicators
  - Dates business cycle when possible
- Composite indexes of general economic activity
  - Series of leading, coincident, and lagging indicators of economic activity to assess the status of the business cycle

Stock Market and Business Cycle

- Stock prices lead the economy
  - Historically, the most sensitive indicator
  - Stock prices consistently turn before the economy
- How reliable is the relationship?
  - The ability of the market to predict recoveries is much better than its ability to predict recessions

Macroeconomic Forecasts of the Economy

- How good are available forecasts?
  - Prominent forecasters have similar predictions and differences in accuracy are very small
    - Investors can use any such forecasts
- Does monetary activity initiated by the FED forecast economic activity?
  - Changes due to shifts in supply or demand
  - Actions of Federal Reserve important

Reading Yield Curves

- Shows relationship between market yields and time to maturity, holding all other characteristics, like credit risk, constant
- Upward sloping and steepening curve implies accelerating economic activity
- Flat structure implies a slowing economy
- Inverted curve may imply a recession
- Actions of FED, expectations important

Understanding the Stock Market

- Market measured by index or average
- Most indexes designed for particular market segment (ex. blue chips)
- Most popular indexes
  - Dow-Jones Industrial Average
  - S&P 500 Composite Stock Index
    - Favored by most institutional investors and money managers

Uses of Market Measures

- Shows how stocks in general are doing at any time
  - Gives a feel for the market
- Shows where in the cycle the market is and sheds light on the future
  - Aids investors in evaluating downside
- Helps judge overall performance
- Used to calculate betas

Determinants of Stock Prices

- Corporate earnings and expected inflation affects expected real earnings
- Interest rates and required rates of return also affected by expected inflation
- Stock prices affected by earnings, rates
  - If economy is prospering, earnings and stock prices will be expected to rise

Determinants of Stock Prices

- From constant growth version of Dividend Discount Model

$$P_0 = D_1/(k-g)$$

- Inverse relationship between interest rates (required rates of return) and stock prices is not linear
  - Determinants of interest rates also affect investor expectations about future

Valuing the Market

- To apply fundamental analysis to the market, estimates are needed of
  - Stream of shareholder benefits
    - Earnings or dividends
  - Required return or earnings multiple
- Steps in estimating earnings stream
  - Estimate GDP, corporate sales, corporate earnings before taxes, and finally corporate earnings after taxes

Valuing the Market

- The earnings multiplier
  - More volatile than earnings component
    - Difficult to predict
  - Cannot simply extrapolate from past P/E ratios, because changes can and do occur
  - 1920-2001 average for S&P 500: 17
  - P/E ratios tend to be high when inflation and interest rates are low
- Put earnings estimate and multiplier together

Forecasting Changes in the Market

- Difficult to consistently forecast the stock market, especially short term
  - EMH states that future cannot be predicted based on past information
  - Although market timing difficult, some situations suggest strong action
- Investors tend to lose more by missing a bull market than by dodging a bear market

Using the Business Cycle to Make Forecasts

- Leading relationship exists between stock market prices and economy
  - Can the market be predicted by the stage of the business cycle?
- Consider business cycle turning points well in advance, before they occur
  - Stock total returns could be negative (positive) when business cycle peaks (bottoms)

Using the Business Cycle to Make Market Forecasts

- If investors can recognize the bottoming of the economy before it occurs, a market rise can be predicted
  - Switch into stocks, out of cash
  - As economy recovers, stock prices may level off or even decline
  - Based on past, the market P/E usually rises just before the end of the slump

Using Key Variables to Make Market Forecasts

- Best known market indicator is the price/earnings ratio
  - Other indicators: dividend yield, earnings yield
- Problems with key market indicators:
  - When are they signaling a change?
  - How reliable is the signal?
  - How quickly will the predicted change occur?

FED's Approach

- Asset allocation changes imply the returns on equity and fixed-income securities are related
- Compare 10-yr. Treasury yields with the earnings yield (E/P) on the S&P 500
  - E/P > (<) T-note yield implies stocks are attractive (unattractive) relatively
- Problems: Loses reliability when rates low, earnings estimated into future

Conclusions

- Market forecasts are not easy, and are subject to error
  - Investors should count on the unexpected occurring
- Intelligent and useful forecasts of the market can be made at certain times, at least as to the likely direction of the market