Chap 2 Stock Market Indices

- Why we care:
  - Gives us an historical perspective of returns (and risk). The Crash of ’87 - the Dow fell 501 points.
  - Allows investors to compare their results with that of the “market”. Usually shows them that they are not beating the market.
  - Used in trading decisions: especially technical analysis. The “Dow” was invented for use in detecting bull or bear markets.
- 1/14/2003

Stock Market Indices

- We will focus on equity indices. These usually measure only price changes - not total return.
- The Dow Jones Industrial Average is the oldest index (1890) and possibly the most followed.
- It is also the most screwed up.
- The DJIA, along with the transports and utility average are simple price averages -
- The fancy definition is a price-weighted index.
- Charles Dow wanted, in 1890, to have a measure of “the market” that was very easy to compute.

Price-Weighted Stock Market Indices

- The DJIA, along with the DJIA, is used in the Dow Theory, an example of trend analysis.
- This measure would tell Dow whether the average stock was going up (a bull market) or down (a bear market).
- Problems with the DJIA as a market indicator include:
  - Only 30, older, stocks in the average.
  - The DJIA is oddly adjusted for stock splits (splits lower the numerator), by lowering the denominator, so that the average is unaffected.
  - Changes in the value of high-priced stocks tend to dominate the index.

Value-Weighted Stock Market Indices

- The next most followed index is the Standard and Poor’s 500. This index is a value-weighted index - the most common (and, I think, sensible) method of index construction.
- Value-weighted indexes are also called market-weighted indexes.
- The market value of a stock is computed as the closing price times the number of shares outstanding (P x Q).
- This is expression often called the stock’s capitalization or “cap” - but is not to be confused with the firm’s capital structure.
Value-Weighted Stock Market Indices

• The value-weighted indexes are (deservedly in biased toward the companies with the highest stock market value: a move in Intel will affect the S&P500 more than a move in MMM.
• The index is the sum of today’s “total cap” of the 500 stocks divided by the total cap” at the time the index was (re)created.
• This ratio is then multiplied by some initial value. In 1942-3, S&P reset its indexes to 10.

Value-Weighted Stock Market Indices

• Most indexes created over the last 40 years have been value-weighted and initially set at 100.
• Examples: NYSE indices, S&P400 midcap, S&P600 midcap, ASE index, NASDAQ index.
• S&P500: sort of the largest 500 cap stocks
• S&P400 midcap: the “next largest” 400 stocks
• S&P600 smallcap: the “next largest” 600 stocks

Value-Weighted Stock Market Indices

• Russell 1000: the “largest” 1000 stocks
• Russell 2000: the “next largest” 2000 stocks. Many use portfolio managers the 2000 as their small-cap benchmark.
• Russell 3000: the “largest” 3000 stocks and is the two Russell indexes put together. Question: Which Russell index (1000 or 2000) is the most important part of the Russell 3000?
• The NASDAQ index used to be considered a small-cap index. But it is now dominated by the likes of Intel, Microsoft, etc.

Other Stock Market Indices

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Other Stock Market Indices

• The Wilshire 5000 is value-weighted but has no denominator.
• In theory, the index is really the total value of all U.S.-based operating-company common stocks (so it does not include ADRs, ETFs, or CEFs etc.)
• The Index incorporates roughly all the U.S. companies that trade on the NYSE, AMEX and the NASDAQ.
• As new companies are added to these markets, they are also added to the Wilshire.
• Currently, the Wilshire 5000 represents over 7000 companies. Attempts to give the total market cap of all US companies.

Other Stock Market Indices

• Strangely, the Value Line Indexes are equally-weighted. The price change of its 1700 stocks (including some CEFs) count equally in calculating the price change of the Value Line indexes.
• The Value Line Index uses the geometric mean of the each of the 1700 stocks’ return that day.
• There is also an arithmetic VL index, that is less followed. This index uses the simple average of the 1700 stocks’ daily returns.
• Some people use the Value Line as measure of how the “typical” or median return is doing.
• The VL indexes are considered small-cap indexes as most companies are “small”

Other Stock Market Indices

• Foreign Stock Indexes can follow any of the above construction methods.
• For Japan, the Nikkei-Dow 225 follows the DJIA methodology (price-weighted). The broader Topix is value-weighted like the S&P500.
• Note: most foreign indexes are in the foreign currency.
• The famous EAFE index (Europe, Australia, Far East) is an index compiled by Morgan-Stanley. USD-based, tracks stocks in the indicated regions.
Other Stock Market Indices

- Bond Indexes usually *add back the interest income.*
- They represent a *cumulative total return.*
- Equity indexes usually measure only *price appreciation* - thus they *understate total return.*