

At the aggregate level, the Graham Directional Indicator measures the strength of market directionality by quantifying the change in the price of each asset over a time period with the degree of daily price variability and taking an average of all markets. The Directional Indicator for each asset class is calculated by quantifying the change in price of an asset over a time period with the degree of daily price variability and taking an average for each asset class. If many markets within the group of markets are trending, we would expect high values of the Directional Indicator. Historical values are based on 55 of the most liquid markets traded in a directional manner by Graham's quantitative strategies using a lookback period of 3 months, 6 months, or 12 months, based on user selection. Selection of a longer lookback period is generally useful in showing longer-term trends, while selection of a shorter lookback period displays short-term market moves.

The Trend Ratio

To quantify the "trendiness" at time (t) for a given market (i) we define the Trend Ratio (TR) which compares the change in price (P) of the asset over a time period (w) in the numerator, with the degree of daily price variability in the denominator:

$$TR_{i,t} = \frac{|P_{i,t} - P_{i,t-w}|}{\sum_{j=t-w}^t |P_{i,j} - P_{i,j-1}|}$$

The Directional Indicator

At the aggregate level, we can calculate the "trendiness" of all markets by calculating a simple average, referring to it as the Directional Indicator (DI). If many markets within the group of n markets are trending, we would expect high values of DI.

$$DI_t = \frac{\sum_{i=1}^n TR_{i,t}}{n}$$