User Guide: Cross Border Finance

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Cross Border Finance is a great website for traders, investors, students, and people interested in finance. This website has been developed on the Flask Framework by three students from the University of Liechtenstein. The website features information on the Dow Jones Industrial Average, financial fundamentals of the constituents and a unique "Value Model" to help you to decide whether a stock is currently undervalued or overvalued.

This user guide helps user to better understand the website and explains the financial terms.

Homepage

On the homepage you get introduced to the Dow Jones Industrial Average Index (DJIA) which is one of the old and most followed equity indices around the globe. The index consists of 30 public companies from lots of different sectors. The index only holds constituents of the type: large cap (Market Capitalization of over \$10 billion.). Furthermore, the Dow Jones Industrial Average is a price weighted index.

The value of the index can be calculated as the sum of the stock prices of the companies included in the index and divided by a factor (Dow Divisor) which is currently approximately 0.152. The factor is changed whenever a constituent company undergoes a stock split so that the value of the index is unaffected by the stock split.

On the lower half of the screen our website introduces all constituents of the Dow Jones Industrial Average. The first column of the table represents the name of the company. The second column introduces you to the ticker symbol. The ticker symbol or also called stock symbol is an abbreviation to uniquely identify publicly traded shares of a particular stock on a particular stock market. The third column hold information on the exchange. A constituent of the DJIA is either traded on the New York Stock Exchange (NYSE) or the Nasdaq Exchange (NASDAQ). The fourth column informs about the sector of the company (e.g., General Industries, Oil and Gas). The fifth and last column informs about the index weighting of each company in the DJIA.

A click on the ticker symbol of one company leads you to the company's page. To access these pages, you need to logged in. In order to login please click on the "Login" button on the top right corner. The login requires a two-factor authentication (2FA) with the Google Authenticator. Please download the Google Authenticator from either the Google Play Store on Android or the App Store on IOS. To successfully login use the secret token displayed on the 2FA website in the Google Authenticator App. The app then generates a One-Time-Password (OTP) which you have to fill in the form on the right side of the page. Proceed to click the "Authenticate User" button. You will then be redirected to the homepage.

Dow Jones 30 Constituents Pages

Each website contains valuable financial information which will be briefly explained here:

Previous Close: The previous close price (in USD) refers to the prior day's final price of the stock when the market officially closes (4.00 PM: Monday through Friday)

52 Week High: This is highest price of which the stock has been traded over the prior 52 weeks. This information can be important to some investors as the use it is an indicator of their investment strategy.

52 Week Low: This is lowest price of which the stock has been traded over the prior 52 weeks. This information can be important to some investors as the use it is an indicator of their investment strategy.

Beta: Beta is a concept that measures the expected move in a stock relative to movements in the overall market. A beta greater than 1.0 suggests that the stock is more volatile than the broader market, and a beta less than 1.0 indicates a stock with lower volatility.

Average volume: Average daily trading volume (ADTV) is the average number of shares of a specific stock traded each day.

Shares outstanding: Shares outstanding are the stock that is held by a company's shareholders on the market.

1 year price target: The one-year price target is an estimate of a stock price for a point in time equal to a year from the current date. The price level most often reflects the collective opinion of different analysts on where the stock will be trading a year from now.

Market Capitalization: Market capitalization refers to the total dollar market value of a company's outstanding shares of stock.

The website also features information such as the address of the headquarters, the industry, or the primary exchange.

The Value Model

The core idea of the Value Model is, that homogeneous goods should be traded for the same price on the market. As we don't have several suppliers with different prices but rather a market, we can't just simply take the average and either go long/short with underpriced/overpriced goods. Therefore, we make the historical prices "more comparable" to today's prices by using the Shiller price-to-earnings ratio CAPE and look for a 10-year average of how the market valued the underlying security.

The core assumption of a relational stock value model that uses the Shiller price-to-earnings ratio (CAPE) for measurement is that the market's long-term average price-to-earnings ratio is a good indicator of the market's overall valuation. The Shiller CAPE is a measure of the market's price-to-earnings ratio that is based on average earnings over the past 10 years, adjusted for inflation. It is named after economist Robert Shiller, who developed the measure to account for fluctuations in earnings that can affect the traditional price-to-earnings ratio.

According to the relational stock value model, if the Shiller CAPE is significantly above its long-term average, it may indicate that the market is overvalued and that future returns may be lower than average. Conversely, if the Shiller CAPE is significantly below its long-term average, it may indicate that the market is undervalued and that future returns may be higher than average.

The relational stock value model assumes that the Shiller CAPE is a reliable indicator of the market's overall valuation because it considers long-term earnings trends and adjusts for inflation, which can help to smooth out short-term fluctuations in earnings and provide a more accurate measure of the market's valuation. However, it is important to note that the Shiller CAPE is just one factor to consider when evaluating the market and that other factors, such as economic conditions and company-specific fundamentals, can also influence stock prices.

So basically, this approach is another source of information which ideally supports you in making easier decisions.