

Valuation and Methodologies used in Equity and Investment Company Research, Sales and Tracker Quants Communications

Equity Research and Sales

Valuation may be via a single method or a combination of multiple methods and comparison of the results derived therefrom. The following three types of methodologies may be used in the valuation of financial instruments:

1. Absolute – This method generates a present value of an asset's expected future cash flow. Absolute methods include multi-period models, e.g. discounted cash flow, or single-period models.

Free Cash Flow (FCF)

The FCF is a measure of financial performance calculated as operating cash flow minus capital expenditures. Free cash flow represents the cash that a company is generating after expenditure of the capital required to maintain or expand its asset base. This metric may be less susceptible to manipulation through accounting methodology than for example, the P/E ratio (see below). Cash flows may be more difficult to forecast for certain companies since sales may be very volatile or uncertain. The success of a company's product launch may be hard to gauge if it is subject to testing, trials and licencing permissions.

It is important to note that negative free cash flow could be both an attractive or unattractive figure depending on circumstances; for example, it could arise due to a company making large capital investments. Free Cash Flow Yield (FCFY) is calculated by taking the FCF flow per share and dividing it by the share price and measures FCF on a per share basis.

This type of valuation method will be used by Research rather than by Sales. It applies particularly to Initial Public Offerings where there is no existing market data and/or where Relative valuation methods are inappropriate.

2. Relative – These methods seek to determine the current value of an asset based on the current price, acquisition cost and/or trading multiples of similar assets.

Price to earnings ratio (P/E)

The P/E ratio is calculated by dividing the company's share price by its earnings per share. It seeks to demonstrate how much investors should be willing to pay for each pound of a company's earnings. All things being equal, an investor should profit more from buying shares with a lower P/E ratio than one with a higher ratio because the investor would benefit from more earnings for each unit of investment.

Notwithstanding, a higher P/E ratio may also indicate a greater expected future gain because of perceived growth opportunities.

The P/E ratio is a useful valuation comparison tool but does have limitations, for example, the P/E ratio is not as effective as a valuation metric when comparing companies across different industries mainly, because the amount an investor is willing to pay for earnings from one sector to another may differ significantly due to inherent risks.

Furthermore, it should be noted that during periods when markets are out of equilibrium (e.g. the tech bubble of 1999), high P/E ratios may reflect over-optimism and over-pricing and conversely, very low P/E ratios can demonstrate undue pessimism.

Investors should differentiate between historical P/E ratios and forecast P/E ratios based on expected earnings because the circumstances of companies are subject to change over time. Forecast P/E ratios are typically used by investors with a view to effectively value a company's share price at the time when a forecast is made.

Price to Book ratio (P/B)

The P/B ratio seeks to illustrate what an investor is willing to pay for each pound of a company's assets. It is calculated by dividing a company's share price by its book value (net assets, less any intangibles such as goodwill). Intangibles are removed from the calculation because this allows investors to value the business on the basis of its physical assets. The absence of intangible assets in the calculation means that the P/B ratio is a relatively conservative metric of valuation. There are circumstances whereby the P/B ratio may be misleading, for example, for companies with a significant proportion of intangible assets to tangible assets, the P/B ratio could be very high. For this reason, P/B is considered more applicable to companies in certain industries with a higher proportion of tangible assets (for example, companies in banking).

Enterprise Value (EV) by EBITDA (EV/EBITDA)

EV seeks to derive a market value of a business from its adjusted market capitalisation. Market capitalisation is adjusted by adding debt, minority interests and preferred shares and deducting total cash and cash equivalents. EV/EBITDA is calculated by dividing a company's EV by its earning before tax, depreciation, and amortization (EBITDA). This valuation metric is particularly used by potential acquirers of a business as it takes debt into account and deducts cash. Consequently, a low ratio may indicate that a company is undervalued. This metric should not be used for comparisons of companies in different sectors as higher multiples would be expected for high growth industries and lower multiples for slower growth sectors.

Net Asset Value (NAV)

NAV is the value of a company's assets minus the value of its liabilities. This metric is often used for valuing shares in sectors where the company's value comes from its holdings of assets rather than its earnings or profits. Sectors where NAV may be appropriate include property companies and investment companies (see below). Investors use the share price to evaluate whether a company's shares are trading at

a discount or premium to its NAV. The NAV has limited or no relevance as an indicator of value in industries where assets are a small proportion of balance sheet value, for example certain asset light technology companies.

3. Option pricing

This method uses a mathematical model such as Black-Scholes-Merton to generate a present value for instruments such as warrants and options.

This method is rarely used by either Research or Sales staff, but has been listed for completeness.

Other factors that may be taken into account in the production of a valuation

In generating a valuation for a financial instrument it is common to make estimations of the future performance of the instrument and to select relevant economic parameters. These assumptions will be based on numerous internal and external factors which may include:

- Past performance;
- Stated business targets and published management guidance;
- Relevant industry and market trends;
- Cost and availability of debt and equity capital;
- Relevant economic inputs, e.g. exchange rates, inflation rates, tax rates; and
- Duration of activity.

Typically historical trading data (e.g. from the company's accounts) and the forecast future performance of the company, based on the assumptions made, will be combined by a Research analyst into a theoretical financial model (e.g. a model based on FCF or the P/E ratio).

Production of Research Analysts' models

An analyst creates a valuation model using one or more of the above methodologies. The model may include a forecast of future earnings/cash flow and will be used to produce a target price and recommendation. The target price may be adjusted for any factors not included in the valuation model.

Valuation methodology, underlying assumptions and target prices are frequently reviewed. Changes to assumptions, financial estimates and target prices can be made at any time in light of information specific to the company concerned, such as annual financial results, or based on changes to relevant market or industry conditions.

The valuation methodology (including information on models used), underlying assumptions and target price for each instrument are detailed in research notes along with other information relevant to the specific investment case.

Investment Company Research

Investment companies are pooled investments that regularly report the fair value of their underlying investments (their NAV – see above). Therefore, the analyst is not seeking to “value” them (i.e. determine their “fair value” or a “target price”), but rather to assess how attractive they are in terms of the investment proposition and their likelihood to meet their investment objectives.

Investment companies are therefore appraised on their individual merits and recommendations are made based on a combination of considerations. These typically include, but are not restricted to, the following factors:

- Investment objective, strategy and process;
- Fund manager and management team;
- Risk/reward profile;
- Past performance;
- Portfolio characteristics;
- Capital structure;
- Corporate governance;
- Price relative to net asset value (premium/discount); and
- Market context including asset class and peer group.

Tracker Quants

Tracker Quants seek to assess and predict trading volume and liquidity events relating to stocks that are part of various index benchmarks in the UK and overseas markets and are likely to be included in or excluded from indices in the future. The analysis we undertake to predict these liquidity events includes:

- Assessment of ranking position in the index;
- Impact of corporate actions on index weightings; and
- Impact of changes as a result of major sales/purchases by shareholders.

In order to make our assessment of future volume and liquidity we use the following sources for computation:

- Subscriber based data files from Index providers;
- In house liquidity and index ranking models; and
- Bloomberg.