

Equities Research Methodology

Fundamental Analysis

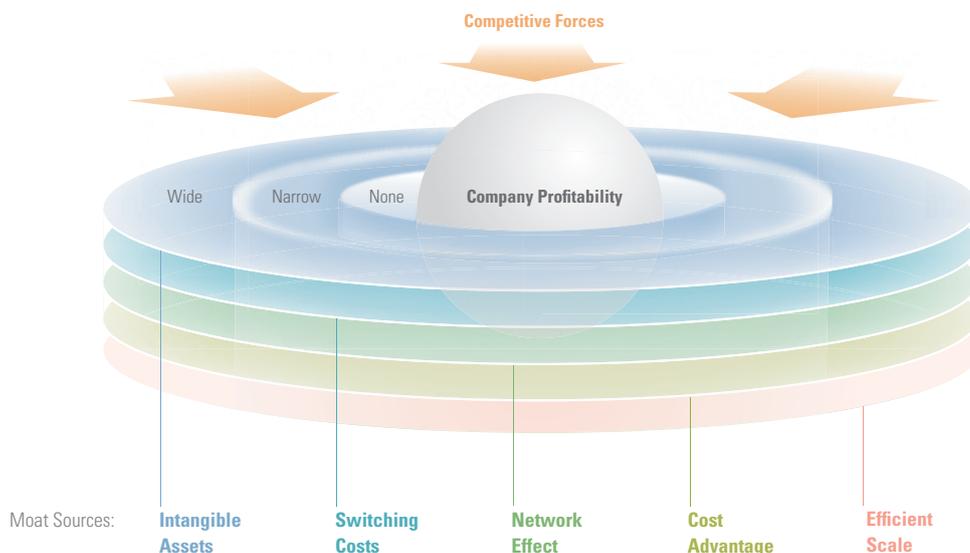
At Morningstar, we believe buying shares of superior businesses and allowing them to compound over time is the surest way to create wealth in the stock market. The long term fundamentals of businesses, such as cash flow, competition, economic cycles, and stewardship, are our primary focus because history has shown that market sentiment is fleeting, momentum can quickly reverse, and the herd is sometimes a dangerous crowd. Occasionally, this approach causes our recommendations to appear out of step, but willingness to be contrarian is an important source of outperformance and a benefit of Morningstar's independence. The brief definitions that follow help illustrate our methodology. Extensive methodology documents are available on our website.

Morningstar Research Process for Company Analysis



Economic Moat

The economic moat concept is a cornerstone of Morningstar's investment philosophy and is used to distinguish high quality companies. An economic moat is a structural feature that allows a firm to sustain excess returns over a long period of time. Without a moat, profits are more susceptible to competition. Companies with a narrow moat are likely to achieve normalised excess returns beyond ten years while wide moat companies are likely to sustain excess returns beyond 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low quality, no moat companies will see their returns gravitate toward the firm's cost of capital more quickly than companies with moats. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.



Fair Value Estimate

Our fair value estimate is primarily based on Morningstar's proprietary three-stage discounted cash flow model. We also use a variety of supplementary fundamental methods to triangulate a company's worth such as sum-of-the-parts, multiples, and yields, among others. We're looking well beyond next quarter to determine the cash-generating ability of a company's assets because history has shown that the market price of a security will migrate towards the firm's intrinsic value over time. Economic moats are not only an important sorting mechanism for quality in our framework, but the designation directly contributes to our estimate of a company's intrinsic value through sustained excess returns on invested capital.

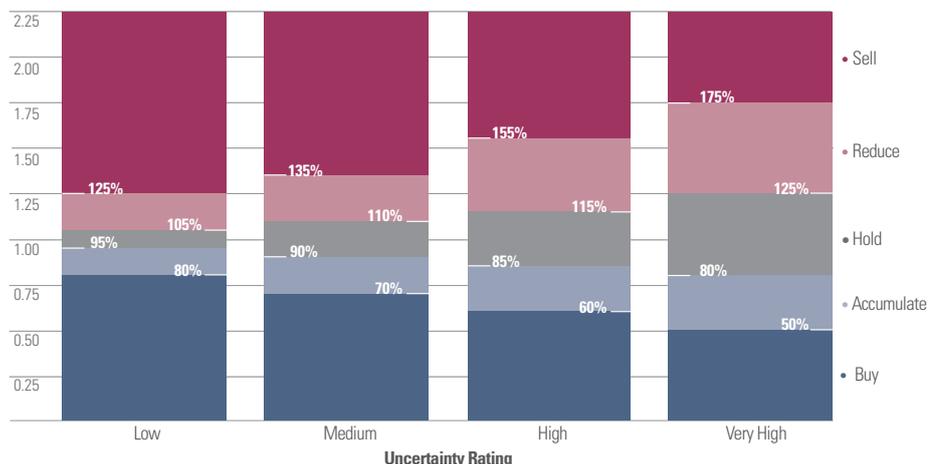
Uncertainty Rating

The Morningstar Uncertainty Rating demonstrates our assessment of a firm's cash flow predictability, or valuation risk. From this rating, we determine appropriate margins of safety: The higher the uncertainty, the wider the margin of safety around our fair value estimate before our recommendations are triggered.

Equities Research Methodology

Our uncertainty ratings are low, medium, high, very high, and extreme. With each uncertainty rating is a corresponding set of price to fair value ratios that drive our recommendations: Lower price/fair values (<1.0) lead to positive recommendations while higher price/fair values (>1.0) lead to negative recommendations. Our price/fair values have proven highly predictive of future stock returns. In very rare cases, the fair value estimate for a firm is so unpredictable that a margin of safety cannot be properly estimated. For these firms, we use a rating of extreme which indicates that nearly all investors should avoid speculating on that company's shares. Risk- and volatility-averse investors should generally avoid very high and extreme uncertainty companies.

Price/Fair Value



Recommendations

Our recommendations are based on the current share price relative to Morningstar's Fair Value Estimate after adjusting for an appropriate margin of safety. These recommendations are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

Depending on the portfolio strategy being employed, the ratings below can indicate different actions for different investors. For example, income investors might be best served holding a fairly valued investment with a reliable dividend stream instead of rotating into a buy recommendation with questionable income characteristics. Nonetheless, our recommendations serve as valuable starting points for equity portfolio strategies.

Recommendations displayed in Morningstar's Australia and New Zealand equity research products: Buy, Accumulate, Hold, Reduce and Sell. Equivalent ratings used in Morningstar's global products are ★★★★★, ★★★★, ★★★, ★★ and ★.

Buy (significantly undervalued, ★★★★★): Our buy recommendations indicate that we believe appreciation beyond a fair risk-adjusted return is highly likely over a multi-year timeframe. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximising upside potential. This rating encourages investors to consider an overweight position in the security relative to the appropriate benchmark.

Accumulate (modestly undervalued, ★★★★): Our accumulate recommendation indicates that we believe appreciation beyond a fair risk-adjusted return is likely. This rating encourages investors to own the firm's shares, possibly overweight relative to the appropriate benchmark after fully considering the security's fit with their targeted portfolio and more attractively-priced alternatives, such as our buy recommendations.

Hold (fairly valued, ★★★): Our hold recommendation indicates that we believe investors are likely to receive a fair risk-adjusted return (cost of equity). Concentrated portfolios might consider exiting these positions completely in favour of more attractively-priced alternatives, pending the availability of less expensive alternatives for a given strategy.

Reduce (modestly overvalued, ★★): Our reduce recommendation indicates that we believe investors are likely to receive a less than fair risk-adjusted return and should consider directing their capital elsewhere. Securities with a reduce recommendation should generally be underweight and exited completely in most strategies, assuming less expensive alternatives are available.

Sell (significantly overvalued, ★): Our sell recommendation indicates that we believe there is a high probability of undesirable risk-adjusted returns from the current market price over a multi-year timeframe. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to substantial loss. This rating encourages investors to strongly consider exiting portfolio positions in the security in nearly all strategies.