

## About Schwab Equity Ratings®

Schwab Equity Ratings use a scale of A, B, C, D, and F, and are assigned to approximately 3,000 U.S.-traded stocks. The Schwab Equity Ratings model universe is generally composed of the combined set of stocks in the Russell 3000 Index and the Standard & Poor's ("S&P") 500. Schwab's research outlook is that A-rated stocks, on average, will strongly outperform, and F-rated stocks, on average, will strongly underperform the equities market during the next 12 months. The explanation and table on page 2 are included to assist you in using Schwab Equity Ratings as one component of your own research to evaluate stocks and potential investment opportunities.

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Schwab Equity Ratings are based upon a disciplined, systematic approach that evaluates each stock on the basis of a wide variety of investment criteria from five broad categories: Growth, Quality, Sentiment, Stability and Valuation. This approach attempts to gauge investor expectations, since stock prices tend to move in the same direction as changes in investor expectations. Stocks with low and potentially improving investor expectations tend to receive the best Schwab Equity Ratings ("A" or "B" ratings), while stocks with high and potentially falling investor expectations tend to receive the worst Schwab Equity Ratings ("D" or "F" ratings). Over time, Schwab may update the Schwab Equity Ratings methodology. For more on the components of Schwab Equity Ratings, see **Schwab Equity Ratings Components** on page 3.

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### Percentile Rankings Explanation

Each of the approximately 3,000 stocks rated in the Schwab Equity Ratings U.S. universe is given a composite score that is derived from the research factors used in the Schwab Equity Ratings model. Once the stock's composite score, which includes all research factor scores, is calculated, the universe of rated stocks is divided into percentiles ranging from 1 to 100. The lowest percentile rankings represent the best Schwab Equity Rating Model scores and correspond to the best letter grades. For example, in a universe of 1000 stocks, the top 10 stocks would receive a percentile ranking of 1 and the bottom 10 stocks would receive a percentile ranking of 100. Stocks ranked in percentile groups 1-10 are rated "A" and those in percentile groups 11-30 are rated "B", and so forth. The table on page 2 illustrates the percentile rankings and approximate Schwab Equity Ratings distributions.

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## Who designed the Schwab Equity Rating methodology?

The Schwab Center for Financial Research (“SCFR”) designed the methodology used to create Schwab Equity Ratings®. The SCFR team has decades of collective experience delivering stock selection models to institutional investors, and is focused on adapting its sophisticated research to the needs of Schwab’s individual investors. SCFR supports Schwab’s investment advice on individual equities, with an emphasis on producing objective, relevant, and useful research for Schwab’s individual investors.

## Schwab Equity Ratings Distribution

Schwab Equity Rating	Percentile Ranking Distribution	Schwab Equity Ratings Distribution	12-Month Return Outlook	General Buy/Hold/Sell Guidance*
A	1–10	Top 10%	Strongly Outperform	Buy
B	11–30	Next 20%	Outperform	Buy
C	31–70	Next 40%	Marketperform	Hold
D	71–90	Next 20%	Underperform	Sell
F	91–100	Bottom 10%	Strongly Underperform	Sell

\*The general buy/hold/sell guidance is relative to other rated equities only. Before considering whether to take any action, an investor should consider whether equities generally are performing well in comparison to other asset classes and whether other equities in the same sector or category with the same or better rating may be more appropriate.

## Descriptions for Nonrated Stocks

Category	Definition	Description
NR	Not Rated	Schwab has decided not to publish a rating for this stock due to unusual or extraordinary business circumstances related to this company. Although Schwab generally does not monitor C-, D-, and F-rated stocks for unusual or extraordinary business circumstances, from time to time, a rating of NR may appear for a particular stock.
NC	Not Covered	This stock is not currently in the Schwab Equity Ratings universe or is prohibited from coverage for regulatory reasons.

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## Investment Ratings Explanation

**“A” Rating (Strongly Outperform):** If an investor is looking to add a stock to his or her portfolio, A-rated stocks may be the best candidates for consideration.

**“B” Rating (Outperform):** An investor looking to add a stock to his or her portfolio should also consider a B-rated stock, although preference should be given to A-rated stocks.

**“C” Rating (Marketperform):** An investor would not usually consider a C-rated stock for purchase. An investor that has a C-rated stock in his or her portfolio should consider continuing to hold the stock, and might monitor the stock’s ongoing performance and compare the potential benefits of owning a stock with a higher rating.

**“D” Rating (Underperform):** An investor holding a D-rated stock should consider whether it is appropriate to continue to hold that stock in his or her portfolio. An investor would not usually consider a D-rated stock for purchase.

**“F” Rating (Strongly Underperform):** An investor holding an F-rated stock should consider whether it is appropriate to eliminate that stock from his or her portfolio. An investor would not usually consider an F-rated stock for purchase.

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## Schwab Equity Ratings® Components

**Growth:** The Growth component underlying the rating is based on several historical growth rates of accounting variables and the estimated growth of other items. Stocks with attributes of high profitability growth, high expected dividend growth but lower expected sales growth tend to have better Growth scores. Highly-rated stocks within this category may have the potential for price appreciation, as investors perceive that the growth potential from these companies are more favorable.

**Quality:** The Quality component underlying the rating is based on a number of operating performance measures derived from recent financial statement data. Stocks with attributes such as high profitability, high earnings quality, conservative investment spending and better operating efficiency tend to have better Quality scores. Highly-rated stocks within this category may have the potential for price appreciation, as investors perceive that these companies have the financial strength to potentially grow earnings faster than their peers.

**Sentiment:** The Sentiment component underlying the rating is based on several measures of both long-term and short-term changes in investors’ expectations. Stocks with attributes such as recently improving analysts’ outlooks, strong and consistent price performance, and optimistic trading positions and trends tend to have better Sentiment scores. Highly-rated stocks within this category may have the potential for price appreciation, as investors become more aware of these companies’ improving performance prospects.

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**Stability:** The Stability component underlying the rating is based on several performance variability measures derived from both recent financial statements and trading data. Stocks with attributes such as low sales volatilities and low trading volume turnovers tend to have better Stability scores. Highly-rated stocks within this category may have the potential for price appreciation, as investors perceive that these companies deserve a premium for their steady business outcomes.

**Valuation:** The Valuation component underlying the rating is based upon several value-oriented investment criteria. In general, stocks with attributes such as relatively high levels of free cash flow, operating income and expected future earnings tend to have better Valuation scores. Highly-rated stocks within this category may have the potential for price appreciation, as investors perceive that the current stock prices of these companies are too low relative to measures of investment value.

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## Special Considerations

### What are some special considerations when using the systematic approach of Schwab Equity Ratings?

Consider the following:

- The quality of the ratings depends on the accuracy of financial data provided by third parties, including the companies rated through the approach.
- Any stock selection discipline has its limitations. Given that systematic stock selection approaches cannot capture all the dynamics that affect individual stock returns, Schwab Equity Ratings may not capture more subjective, qualitative influences on risk and return, such as management changes and pending lawsuits. Furthermore, the ratings may not reflect the possible impact of late-breaking news. Thus, it is important to conduct additional research prior to making a trading decision.
- Schwab Equity Ratings are generally updated weekly, with the updated ratings published prior to Monday mornings. As a result, ratings may not reflect the possible impact of late-breaking news that has occurred during the current week. Again, investors should always check the news prior to making a trading decision.
- The approach is intended to support long-term, diversified investing and is not appropriate for short-term trading strategies.
- Schwab Equity Ratings, percentile rankings, and the general guidance are not personal recommendations for any particular investor or client and do not take into account the financial, investment, or other objectives or needs of, and may not be suitable for, any particular investor or client. Before buying, investors and clients should consider whether the investment is suitable for themselves and their portfolio.

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