# Managing a Stock Portfolio with Schwab Equity Ratings (SER)



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# PART I: PLANNING YOUR PORTFOLIO

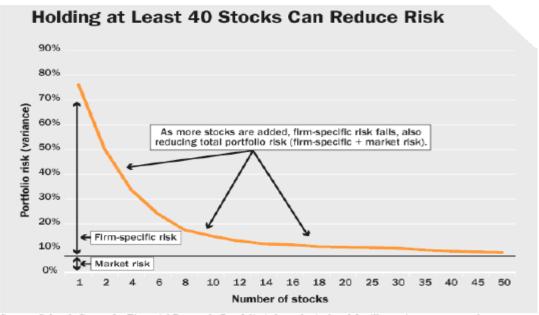
The purpose of this guide – Managing a Stock Portfolio with Schwab Equity Ratings – is to describe a systematic, disciplined process that utilizes Schwab Equity Ratings to create and manage a portfolio of stocks. The Ratings represent a tool that may be able to assist you in your investment decision making process. If utilized correctly they have the potential to help improve your risk adjusted portfolio performance, reduce research time, and avoid common mistakes in constructing and managing the equity allocation of your overall portfolio.

Before addressing the details of how to select stocks, manage and potentially grow your portfolio let's focus on the critical first step: planning, or laying the foundation of your investment plan. If you can get your plan right early, the future is potentially bright. Get it wrong, and you may find it difficult to reach your goals. If you haven't done so already, please consider scheduling some time to meet with one of Schwab's investment professionals to discuss your investment goals. Are you saving for retirement or college expenses? Planning an estate? Concerned about taxes? These are just some of the topics that Schwab can help you with before you implement your plan.

For the purpose of the rest of this guide, let's assume you've already met with one of Schwab's investment professionals. You discussed with them your investment goals and objectives, and you are ready to put an investment plan into action. Let's further assume that they have helped you identify the type of investor that you are – somewhere on the spectrum of aggressive, moderate or conservative – and they have helped you allocate an appropriate percentage of your investment assets to cash, fixed income, commodity, and other potential asset classes. Our assumption for the rest of this guide is that **you have made the decision to actively manage the equity allocation of your portfolio**.

A few other assumptions should also be made: that you believe in the premise of active management, that you have sufficient financial capital, that you are willing to make the personal commitment, and that you've come to some understanding of your risk tolerance.

One of the most important things that the Ratings can do is help you tilt the risk-reward equation in your favor. A key aspect of active stock investing is reducing, as much as possible, known sources of risk. Financial theory divides a stock's risk into "firm-specific risk" (risk related to an individual stock) and "market risk," or the general risk of investing in stocks. Firm-specific risk can be managed by holding a diversified portfolio; market risk cannot. To illustrate these two kinds of risk, take a look at the following chart. As you can see from the graph below, the firm specific portion of total risk falls sharply as the number of stocks in your portfolio increases, because poor returns for some stocks can generally be offset by good returns for others – if you hold more stocks.



Source: Schwab Center for Financial Research. Portfolio is hypothetical and for illustrative purposes only.

Academic research (Markowitz, 1952) suggests that you need to hold a large number of randomly selected stocks (50 or more) to significantly reduce firm-specific risk. But because we believe that Schwab Equity Ratings represent a smarter approach than random selection, we believe you can substantially improve your risk-return trade-off by building a portfolio of 20-30 highly rated stocks, with your dollar investment in each category weighted to match your asset allocation plan and with each of the economy's sectors represented in proportion to its benchmark weight.

A benchmark is a standard for measuring investment success. You're probably already familiar with stock indexes – averages of the performance of securities in a particular market or market segment – as barometers of the market's behavior. But indexes (and index funds, which attempt to match the performance of specific indexes) may also be used as performance benchmark.

Your portfolio's benchmark should represent the types of stocks you want to hold. Just as we wouldn't hold this year's Little League champions to the same standards as the New York Yankees, the performance of your stock portfolio should be measured against an index that's representative of the types of stocks you hold. Some common stock indexes are the S&P 500 and the Russell 3000.

Assuming that you utilize Schwab Equity Ratings to construct and manage a diversified stock portfolio that holds both large- and small-company stocks drawn from all economic sectors, we suggest that you utilize the Russell 3000 Index. Performance data for this index and other indexes is available on the Schwab website.

A final comment about benchmarks: "Making money" is not a reasonable benchmark for stock investors, particularly over short periods. In general, only very conservative investments like money market funds or Treasury bills tend to hold their nominal values in most periods (though they can lose value after the effects of taxes and inflation are taken into account). Equity investing should be for long-term capital growth, not short-term money making.

Although most investors aim to achieve superior long-term returns, it's important to set realistic expectations and to measure your performance appropriately. So, once your portfolio is in place, you'll want to avoid some of the most common pitfalls that often prevent investors from staying on track:

• Evaluate <u>portfolio</u> performance and don't focus on a small number of winning or losing stocks.

Schwab Equity Ratings cannot accurately predict every single stock, and in any period, some A- and B-rated stocks are almost certain to decline relative to the market in general.

- Measure your results over a specified time horizon. This should be done at least annually, but ideally
  over a full market cycle (peak-to-peak or trough-to-trough). Avoid the temptation to evaluate
  performance on a short-term basis, such as daily, weekly or monthly.
- Understand that even the best stock-selection strategies won't work all the time. In periods when
  investors exhibit "risk-loving" behavior (e.g., the late 1990s), Schwab Equity Ratings may not perform
  as expected. Look past the short term and focus on the long term in evaluating your strategy.
- Finally, focus on relative, not absolute, performance. A 5% gain could represent poor performance if your portfolio's benchmark has risen 10%, and an 8% loss in your portfolio's value may represent exceptional performance if your benchmark has fallen 20%.

Now that we've covered creating a financial plan, made some assumptions about your portfolio's equity allocation, and discussed performance measurement and benchmarks, let's turn our attention to how to use Schwab Equity Ratings to select stocks and monitor and maintain your portfolio.

## PART II: HOW WE RATE STOCKS

With Schwab Equity Ratings as a starting point, you'll find roughly 300 A-rated stocks, with approximately 10% of the stocks in every economic sector rated A and 20% rated B. With that many possibilities to choose from, your initial focus should be to eliminate stocks that you consider to be questionable investments. Consider the three step research process we suggest here as a process of elimination. If a stock passes through the filters represented by the following steps, consider buying it. If it doesn't, move on to the next candidate.

Schwab Equity Ratings Department believes that stock selection involves three stages of research:

**Primary Research:** Start by finding stocks rated A or B by Schwab Equity Ratings. Check to make sure that the stock is appropriate for your portfolio, understand the perspectives on the stock that are embodied in its Rating, and gain a basic knowledge of the company and its industry.

**Secondary Research:** Next, check for additional information that may not yet be incorporated in the stock's Rating. This might include recent news, price trends, earnings history and upcoming earnings announcements. It may also include the opinions of other research providers offered online at schwab.com.

**Optional Research:** As the term suggests, optional research is not as important as that described above. Rather, this is a "time permitting" step delivering additional insight into the company, its operations, its sector and sub-industry, and its environment. The Schwab Equity Research team developed the following eight-step process to winnow your choices. If you're a Schwab client, log in to apply the method to your own portfolio.

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# **Primary Research**

**Step 1: Start with As and Bs**. This rule is the core principle of our recommended research process, in terms of what to consider for purchase. Over the period from the inception of Schwab Equity Ratings on May 6, 2002 through July 24, 2017, A-rated stocks on average have outperformed the average stock by 4.6% and B-rated stocks on average have outperformed by 2.5% over all 52-week periods. A-rated stocks are preferred to B-rated, and more highly-ranked B's are preferred to lower-ranked B's.

How do you find A- and B-rated stocks on the schwab.com website? An easy way is to use Schwab's Stock Lists. After logging in, select Research, click on Stocks and select the tab for "Schwab stock Lists™". The Schwab Composite list presents the three top-rated stocks from each of the economic sectors. Individual sector lists contain the five top-rated stocks in each sector. And finally, four style lists contain the ten top-rated stocks in each of the large- and small-cap growth and large- and small-cap value style categories.

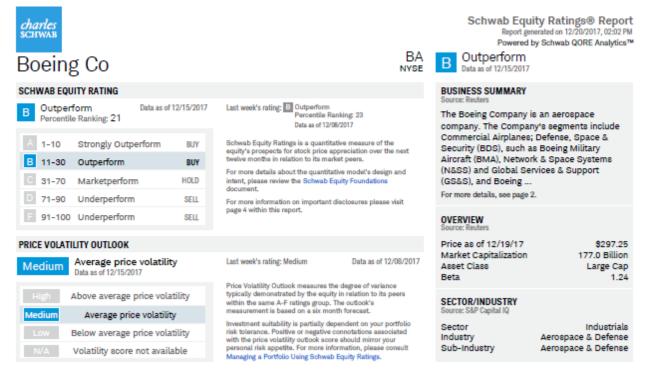
Additionally, the Schwab Stock Screener can be used to help you find stocks using specific criteria that meet your personal objectives (for example, A- or B-rated high dividend yielding stocks). You can access the Stock Screener by selecting Research >> Stocks >> Screeners >> Screen for Stocks, as shown below.



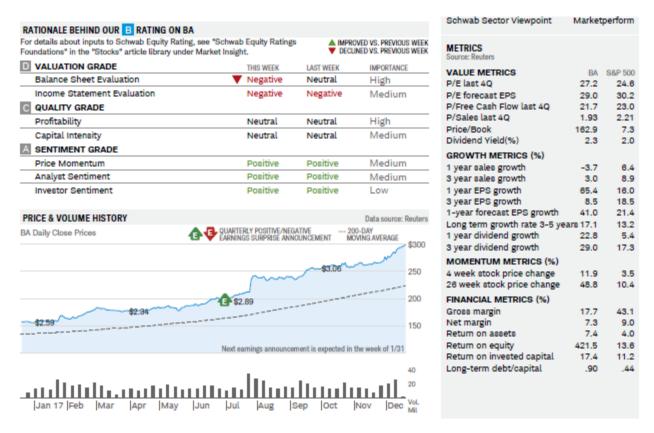
Sometimes you may need to use both methods to find a stock. For example, a specific sector may not show any A-rated large-capitalization stocks in the Composite, Sector, or Style lists. In that case, the Stock Screener may be able to identify large-cap, A-rated stocks in the desired sector.

Schwab Equity Ratings are structured as a "sector-neutral" stock selection methodology. In other words, the highest-ranked 10% of all rated stocks within each market sector—Energy, Utilities, Industrials, Health Care, and so on—will be A-rated. The next highest ranked 20% of each sector's stocks will be rated B. This simplifies the process of creating and maintaining a portfolio of stocks diversified across sectors, as you will always be able to find A-rated and high B-rated stocks in every sector.

**Step 2: Get inside the rating.** The Schwab Equity Ratings Report displays a stock's current rating and percentile rank, last week's rating and rank, and a visual display of the rating on a scale from 1-100.



\*Example of Schwab Equity Ratings Report included for illustrative purposes only. It is not intended to be representative of a current report you could expect to see. Schwab Equity Ratings are updated on a weekly basis and you would want to log onto Schwab.com for current information.



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The left side of the Report's first page displays the "Rationale Behind our Rating". This section provides useful details on our Research Concepts—the variables, described in general terms, which underlie each of the component grades (Valuation, Quality and Sentiment). You can see each concept's current value, its importance, and any change from the previous week. Declines in the past week are indicated by downward-pointing arrows, and upward-pointing arrows indicate improvements. You can also see a more detailed explanation of the research concepts by entering a ticker, clicking on the Ratings tab, and looking at the Schwab's Viewpoint tab. Simply click on the "expand all" link for a more detailed description of the research concepts.

If a component grade has changed, you'll want to find out what drove the change. For example, in the Valuation component, if short sellers feel that the stock's prospects are improving and they reduce their short positions in that stock, it might be an indication that they believe the stock is undervalued. Or, in the Sentiment component, recent changes in the recommendations and earnings estimates of brokerage analysts can be interpreted as an early sign of changing market sentiment.

Keep in mind that there's no reason to favor recent ratings upgrades. Schwab research suggests that stocks that recently became A-rated are neither more nor less likely to outperform the market than a stock that's been rated A for a longer period.

#### Step 3: Check the stock's SER Volatility Outlook

Every investor is unique. We all have different financial goals and different levels of risk tolerance associated with achieving those goals. The classic example which highlights the differences between risk appetites compares someone close to retirement, guarding their nest egg, versus a young professional pursuing a selection of individual equity positions to invigorate their portfolio. Schwab Equity Ratings' Price Volatility Outlook metric

provides some beneficial insights into the projected volatility of a particular stock to help our clients assess the goodness of fit for their unique financial goals.

While price volatility is a single aspect of a useful risk measure, it's not the total risk of an asset which would incorporate measures of all of the above risks and offer estimates as to the loss of earnings power of a company. However, most of these other risks are not easily quantifiable, hence we compute what we can and estimates of the future volatility of an asset are still a useful proxy for the riskiness of an asset, albeit with limitations.

In fact, empirical evidence has shown forecasting price volatility has higher level of success than does forecasting return. That is, one can forecast future volatility of a stock more correctly and more often, than one can forecast the future returns of a stock. Schwab Equity Ratings' Price Volatility measurement provides an objective view into obscure underlying risks. It provides a process for independently projecting the future price volatility of a stock to arm the intelligent investor in his or her decision making.

The supplemental price volatility outlook ratings distribution is as follows and should be used by those clients who are concerned with the potential near term volatility of their investments.

Price Volatility Risk Classification	Percentile Ranking Distribution	Distribution of Rating Within A/B/C/D/F	6 month Volatility Outlook
		Rating Group	
Low	1-33.33	Top 1/3 <sup>rd</sup>	Low
Medium	33.34-66.66	Next 1/3 <sup>rd</sup>	Medium
High	66.67-100	Bottom 1/3 <sup>rd</sup>	High

Step 4: Ask yourself if the stock is appropriate for your portfolio. Does the stock fit your strategy and objectives, as well as the specific needs of your portfolio? The Overview, Sector / Industry and Metrics sections on the right-hand side of the Schwab Equity Ratings Report can help answer this question. For example, check a stock's Asset Class in the Overview section for its market capitalization category. The Metrics section displays common valuation, momentum and growth measures (relative to the average for companies in the S&P 500® in most cases). And check the company's expanded business description on the second page of the Schwab Equity Ratings Report. It will provide you with a better understanding of the company's industry, geographic areas of operations, and other aspects of its business.

# **Secondary Research – Checking for New Information**

Schwab Equity Ratings are recalculated each weekend and published Sunday evening. Information arriving during the subsequent week won't be captured in a Rating until the update on the next weekend. Secondary research is intended to check for significant, very recent information that may not yet be reflected in a stock's Rating. Keep in mind that if you discover news that makes you unwilling to purchase a particular stock, you should eliminate it and move on. There are approximately 300 other A-rated stocks and 600 other B-rated stocks available, so an acceptable alternative should be relatively easy to find.

Conduct your secondary research using the following process:

**Step 5: Do a market sentiment check.** A "sentiment check" looks for evidence of recent changes in investor perception as reflected in the stock's price history. Price charts offering comparisons with a 200-day moving average of the stock's price, its weekly trading volume, the last 4 quarterly EPS values, and its performance relative to the Standard & Poor's S&P 500 Index are shown in the lower left-hand corner of the first page of the Schwab Equity Ratings Report.

- Consider how the stock's price has moved over the prior 3 months, relative to a broad market index.
- If a stock in the midst of a major (20% from peak) downswing, eliminate it and move on.
- If you see price or volume spikes (up or down) in the last 1-2 weeks, check the news (see below) and the company's earnings. At the company level, markets react for a reason, so try to determine the reason for any unusual price or volume behavior.

Once you enter a ticker, the Charts tab allows you to create, modify, and save charts of a stock's price movements and trading volume over various periods, relative to various market indexes, and with events such as stock splits, dividends, and earnings announcements identified by date of occurrence. A simple, useful standardized chart might display a stock's price movement relative to the S&P 500 during the past three months.

**Step 6: Check the company's earnings.** The second page of the Schwab Equity Ratings Report contains, in the upper left-hand corner, important information about the company's reported and expected quarterly and annual earnings and revenues. It also includes its quarterly and annual dividends, and information about current consensus (i.e., the average of analysts who follow the company) forecasts of expected earnings and expected long-term earnings growth rates.

Regarding Earnings Per Share (EPS), here are some things to consider:

- Check the expected date of the next EPS announcement if it's within the next 1-2 weeks, you may want to wait until shortly after this date to assess the market reaction to the earnings announcement.
- Check the rows that display the percentage changes in EPS versus the year-ago quarter or prior year and the stock's "Earnings Surprises." If the last quarterly earnings report was a negative surprise of 5% or more in other words, if quarterly earnings were 5% or more below the consensus estimate eliminate the stock and move on.
- If a company failed to report its earnings by the expected EPS report date, eliminate it and move on. Late reporting often signals looming problems.

**Step 7: Check the news.** Potential news sources include company press releases, Securities and Exchange Commission filings, publicly available news media, and others. Many news stories are simply not relevant in terms of impacting stock prices. Focus instead on non-quantitative but significant news items.

Examples of the things a news check should search for include, but are not limited to:

- Product news (recalls, new product releases, patents granted or ending)
- Company news (management changes, changes of auditors)
- Competitive developments
- Significant litigation (e.g., product liability or environmental issues)
- An investigation by a tax, regulatory, or investigative body
- An announced offering of new shares that may dilute earnings per share
- Announced merger or acquisition activity
- Significant volume of insider sales
- Delayed filing of financial statements or restatements of prior filings

The existence of news regarding these events does not necessarily eliminate a company from consideration, but you should familiarize yourself with the nature of the event and evaluate its potential impact on the stock before proceeding. If a news event makes you unwilling to invest in a stock, eliminate it and move on.

# **Optional Research**

The goal of optional research is to check for more detailed information, principally for informational purposes. If you have time, consider the following sources, most of which are available on the Reports tab of the Quotes & Research / Stocks page:

- More detailed business and industry information: Check the Schwab Company Report and reports provided by third-party sources.
- Sector outlook: The Schwab Sector Views Report summarizes recent developments in each economic Sector.
- Sub-Industry outlook: The S&P Sub-Industry Outlook report provides an overview and evaluation of the sub-industry of a selected stock.

Independent Third-Party Research: Schwab provides research from several other organizations that can provide additional information about companies. You can find the recommendations of other independent third-party research providers on the second page of the Schwab Equity Ratings Report, or click on the Ratings tab and select Other Ratings. Don't expect total agreement between Schwab Equity Ratings and the recommendations of independent third-party research providers, but note any major difference. If a stock's Schwab Equity Rating is A or B but one or more third-party recommendations are "Sell," "Underperform," or the equivalent, try to determine the reason for the negative rating.

### PART III: MANAGING YOUR PORTFOLIO

Once you've built your portfolio – a diversified portfolio of at least 20 large- and small-cap stocks drawn from various economic sectors – you're in the "monitor and maintain" stage of the portfolio management process. In this section, you'll learn how to monitor your portfolio to determine when you should sell stocks, rebalance your portfolio, and react to changes in your stocks' Ratings.

Keep the following points in mind:

- Know Why You Bought the Stock, and Why You Would Sell: We suggested a fairly simple set of reasons for your purchases in Part II of this Guide (A- or B-rated, matched the Sector and market capitalization guidelines that assist in portfolio diversification, passed the criteria suggested by the Secondary Research steps). You should have an equally clear set of reasons for why you would sell.
- **Develop Sell Rules and Stick to Them:** Sell strategies are as important as buy strategies Don't neglect them! Schwab Equity Ratings provide a straightforward sell strategy: consider selling a stock if its Rating falls to D or below. This recommendation is as important as our suggestion to consider purchasing A- and B-rated stocks. Other sell rules, such as sales of overly concentrated positions or of stocks that no longer meet your portfolio's objectives, may also be applicable.
- **Buy and Hold Until the Facts Change:** "Buy and hold" is sound advice at the asset allocation level. But for individual stocks, long-term investing does not mean "buy and never sell." Even the greatest stocks can become mediocre performers at some point. Thoughtful investors should always be willing to consider selling when the facts suggest it, and when a potentially better investing opportunity is available.
- "There are No Holds, Only Buys and Sells" is Bad Advice: Taxes should never be the sole consideration in your decisions, but they may argue in favor of holding a stock. Selling C-rated stocks results in higher turnover and higher turnover means higher transaction costs, which can significantly reduce returns. Finally, C-rated stocks are expected to perform in line with the overall stock market and unless a better candidate can be found, that may be an acceptable result.
- **Put Your Emotions On Hold:** Academic researchers (Barber-Odean, 2011) have found that selling can be more difficult for the average investor than buying. Investors may become emotionally attached to a stock, fixate erroneously on the price they paid for it, or believe that selling is equivalent to admitting a mistake. None of these reasons has any basis in fact. And facts not emotions should drive your investment decisions.

# **Monitoring Your Portfolio**

Monitor your portfolio each week by using the Accounts tab and selecting the Market Value view of the Positions tab to see the current Schwab Equity Rating of each stock in your portfolio.

We recommend that you consider establishing a Schwab Equity Ratings alert for your portfolio. To do so, log in to your account and click on the "Service" tab. Next select "Alerts" and then click on 'Portfolio Alerts." In the list of portfolio alerts, check the setting for "Schwab Equity Ratings®" and click on the "Update" button to save this setting.

What should you look for in monitoring your portfolio? Three things: the current Rating, a change in the Rating from the prior week, and the relative weight of each stock and each Sector within your overall stock portfolio. We'll discuss the importance of the last point later in this Guide (under "Maintaining Diversification").

What if the Rating has changed? Our guidance for the appropriate response depends on the change itself.

- From A to B/From A to C/From B to C: generally, no action is required. Since all stocks are rated relative to one another, a stock's Rating change may be caused by changes in the Ratings of other stocks, not by any change in the characteristics of the stock itself.
- Small changes in percentile ranks that lead to a change in the Rating (e.g., an A-rated stock with a percentile rank 5 changing to a B rating with a rank of 6) are typically not significant. This phenomenon is known as "ratings flutter" and can occur whenever a specific numerical boundary exists between ratings categories.
- From A, B, or C to D or F: such a change suggests that you should seriously consider selling the stock. Check the "Schwab's Viewpoint" tab to see which Research Concept(s) are driving the Rating change from the prior week by looking for the colored directional arrows.
- Selling C-rated stocks leads to higher turnover, higher transaction costs, and at least potentially to higher taxes, since a larger fraction of your gains will be short-term in nature.
- Ratings changes other than changes from A, B, or C to D or F have no further information content. For example, a B-rated stock that was A-rated last week has neither more nor less future investment potential than a B-rated stock that was C-rated last week. Nor do Ratings changes move in trends. A stock recently upgraded to B is no more likely to be upgraded to an A in the future than a stock that was recently downgraded from an A.

# **Maintaining Diversification**

Earlier we mentioned that your weekly portfolio monitoring process should review the relative weights of the stocks and sectors in your portfolio's overall market value. Your portfolio's diversification can be undercut if one or more of the stocks in your portfolio experience a significant increase in value. This may sound like a problem you'd love to have, but a lack of diversification may expose you to additional risk without an associated reward. Consider selling part of a position, or part of your holdings within a sector, if:

- The market value of any individual stock in your portfolio is more than twice an equally-weighted share of your portfolio's value. For example, if you have a 20-stock portfolio, equal weighting would mean that each stock represents 5% of your portfolio. If a stock rises to 10%, consider selling a part of the position.
- The market value of any sector in your portfolio exceeds more than twice the proportionate weight of that sector in your benchmark index. You can find Sector weightings in a variety of benchmark indexes in Schwab's Sector Views (after logging in, select the Research tab, then click on the link to "Schwab Sector Views on the Markets page). For example, suppose that the Health Care sector was 15% of the S&P 500, which you use as a benchmark. If your Health Care stocks represent more than 30% of your portfolio's value, consider selling part of your position, starting with the stocks with the lowest Schwab Equity Ratings.

#### Portfolio Performance

The final step in managing and monitoring your portfolio is to periodically evaluate your performance relative to your selected benchmark. Use the Performance feature of schwab.com to evaluate your performance, at least annually. But remember that short-term performance can vary considerably. Using Schwab Equity Ratings means that you are investing via a strategy – a strategy that emphasizes holding quality stocks and investing without emotion for the long term. The most appropriate period for evaluating such a strategy may be a full market cycle (from one market peak to the next or one trough to the next). A focus on short-term performance can lead

investors to abandon a winning strategy just at the very point when it should be maintained. Stick with your strategy until it has had time to work!

# Important Disclosures

Investors should consider carefully information contained in the prospectus, or if available, the summary prospectus, including investment objectives, risks, charges and expenses. Please read it carefully before investing. You can request a prospectus by calling Schwab at 1-800-435-4000 or by visiting <a href="https://www.schwab.com">www.schwab.com</a>.

Important disclosures about Schwab Equity Ratings and Schwab Stock Lists

The Schwab Stock Lists, Schwab Equity Ratings and other materials are for informational purposes only and are not an offer to sell or the solicitation of an offer to buy. Additionally, Schwab Equity Ratings 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.

Investors and clients should consider Schwab Equity Ratings as only a single factor in making their investment decision while taking into account the current market environment. Accordingly, Charles Schwab & Co., Inc. ("Schwab") does not assess the suitability (or the potential value) of any particular investment. Schwab also does not provide tax advice and the views in the material do not take into account any client's or investor's tax situation. Clients and investors should consult their tax advisers before investing. Schwab Equity Ratings utilize third-party data in the forming of a rating. While Schwab believes such third-party information is reliable, we do not guarantee its accuracy, timeliness or completeness.

Schwab Equity Ratings and Schwab Stock Lists are generally updated weekly, so you should review and consider any recent market or company news before taking any action. Stocks may go down as well as up and investors (including clients) may lose money, including their original investment. Past history is no indication of future performance and returns are not guaranteed. For individualized advice, please contact Schwab at 1 (877) 284-9817. For more information, see <a href="About Schwab Equity Ratings">About Schwab Equity Ratings</a>.

The Schwab Center for Financial Research may provide research consulting services, such as those related to Schwab Equity Ratings model design and performance, to Schwab investment advisory affiliates for their asset management purposes. Such services are not available to all other clients.

Past performance is no guarantee of future results, and your investment value and return will fluctuate such that shares, when redeemed, may be worth more or less than original cost.

Schwab Equity Ratings are assigned to approximately 3,000 of the largest (by market capitalization) U.S.-headquartered stocks using a scale of A, B, C, D and F. Schwab's outlook is that A-rated stocks, on average, will strongly outperform and F-rated stocks, on average, will strongly underperform the equities market over the next 12 months. Each of the approximately 3,000 stocks rated in the Schwab Equity Ratings universe is given a score derived from several research factors. Schwab Equity Ratings are not personal recommendations for any particular investor. Before buying, investors should consider whether the investment is suitable for themselves and their portfolio.

The S&P 500 and Russell 3000 are both considered indices of widely traded stocks. Indexes are unmanaged, do not incur fees or expenses and cannot be invested in directly.

Small-cap stocks have historically been more volatile than the stocks of larger, more established companies.

This report is for informational purposes only and is not an offer, solicitation or recommendation that any particular investor should purchase or sell any particular security or pursue a particular investment strategy. All expressions of opinion are subject to change without notice in reaction to shifting market conditions. Examples are provided for illustrative purposes only and not intended to be reflective of results you should expect to achieve.

Diversification and rebalancing strategies do not ensure a profit and do not protect against losses in any market environment. Rebalancing may cause investors to incur transaction costs and, when rebalancing a non-retirement account, taxable events may be created that may affect your tax liability.

This information is not intended to be a substitute for specific individualized tax, legal or investment planning advice. Where specific advice is necessary or appropriate, Schwab recommends consultation with a qualified tax advisor, CPA, Financial Planner or Investment Manager.

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# **Bibliography**

Barber, Brad M. and Odean, Terrance. (2011). *The Behavior of Individual Investors*. Graduate School of Management, University of California, Davis.

Markowitz, Harry. (1952). Portfolio Selection. The Journal of Finance, Vol. 7, No. 1. Pp. 77-91.