Introducing Investor Advantage Pricing

Exclusive mortgage rate discounts for Schwab clients.

Our new Investor Advantage Pricing offers discounted mortgage rates on eligible loans, based on the assets in your Schwab brokerage and Bank accounts.

Call 1-877-490-6837 or visit schwab.com/mortgagerates to get started.
FEATURES

23 SMART BETA
Five questions you should ask before investing in these strategies.

28 COUPLES AND FINANCES
A checklist to get you and your partner on the same page.

32 ONE RETIREMENT, TWO PORTFOLIOS
Are you working toward the same goals?

On Investing (ISSN 1523-5327) is published quarterly. This publication is mailed at Standard A postal rates. If you prefer not to receive On Investing, please call 888-484-5340.

POSTMASTER: Send address changes to On Investing, Charles Schwab & Co., Inc., P.O. Box 52114, Phoenix, AZ 85072–2114. On Investing does not assume any liability resulting from actions taken based on the information included in this magazine. Mention of a company or security does not constitute endorsement. Some contributors to On Investing may have active positions in securities or companies discussed in this issue. NWS73442Q316-00

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC.
Read On Investing online

SIGN UP for our paperless edition at schwab.com/Onpaperless today. We’ll send you an email to let you know when a new issue of the magazine is published on schwab.com.

BEYOND THE MAGAZINE

AND WHILE YOU’RE ONLINE, explore the other great content Schwab has to offer—articles, infographics, podcasts, slideshows and videos—geared toward helping you stay engaged with your investments.

Visit us at schwab/OIinsights.
Why We Set Goals

Setting specific, measurable investing goals could lead to better outcomes.

A favorite part of my job is talking with clients about what’s on their minds. One of their most common questions is, “How should I navigate this market?” In general, I hesitate to answer questions like this because it means reducing the short-term unpredictability of the markets and the intricate world of investing down to a single universal truth. That said, there is one piece of advice I give freely: Set specific, measurable goals.

Ask 100 investors to describe their most important investing goal, and they will likely say, “save for retirement.” And while that is hugely important, it’s too broad to be useful. A more helpful goal would include a dollar amount and time frame. So, “save for retirement” might become “save $750,000 by the time I turn 60,” which is much more tangible.

The beauty of setting specific goals is that you’re investing on your terms—you’re not just saving for retirement; you’re saving for your retirement. It’s easier to commit to a goal when you know exactly what it will take to get there. In fact, research shows that investors who establish a plan to help them reach their goals tend to be more confident about the outcome than those who don’t.¹

Setting goals also makes it easier to evaluate your portfolio’s performance and make adjustments when needed. Market benchmarks are useful in measuring the performance of individual investments, but they can’t tell you if you are saving enough or taking on the right level of risk. Using goals as a yardstick for long-term performance also allows you to rise above short-term volatility. If you’re meeting your savings goals and your portfolio allocation reflects your tolerance for risk, you’re less likely to overreact when the market gyrates.

I’ve found that it helps to establish different accounts for different goals because each one has unique circumstances. For example, if you have 30 years until retirement but only 10 until your child leaves for college, you’ll want to invest those savings differently. Separating the funds into unique accounts allows you to more easily make goal-specific investing decisions and monitor your progress.

Of course, setting realistic goals requires making assumptions about the future, including how much money you’ll need and how soon you’ll need it. For help crunching those numbers or stress-testing your assumptions, call us or stop by a branch. Our investment professionals would love to discuss where you’re headed and how we can help you get there.

Sincerely,

Walt Bettinger,
President & CEO

¹According to a Schwab survey of 1,000 retail clients in December 2015, 57% of clients with a plan are extremely/very confident that they will reach their financial goals, versus 37% of clients without a plan.

See page 42 for important information.

(0316-DY0P)
Undue Influence
Don’t let recency bias derail your investment plan.

There’s nothing like a blizzard to drive up demand for snow tires. At work there is a phenomenon known as “recency bias,” which is our tendency to believe that something is more likely to happen again because it occurred in the recent past. The inverse is also true: The longer it’s been since an event took place, the less likely we are to believe it will happen in the near future.

When it comes to investing, recency bias often manifests itself in terms of direction or momentum. It convinces us that a rising market or individual stock will continue to appreciate, or that a declining market or stock is likely to keep falling. This bias often leads us to make emotionally charged choices—decisions that could erode our earning potential by tempting us to hold a stock for too long or pull out too soon.

Recency bias tends to be exacerbated during periods of large market moves. Before the dot-com bubble burst in 2000, for instance, rapidly appreciating stock prices convinced many investors to keep riding out the market. Similarly, many others who sold off shares during the global recession of 2008–2009 missed much of the market rally that followed.

Maintaining a long-term investment plan is one of the best defenses against recency bias. Your long-term asset allocation targets should reflect your investing goals, tolerance for risk and cash needs. Periodically, you may need to reassess your expectations for the long-term performance of various asset classes, but any resulting changes to your allocation should be modest. Use valuation metrics, such as price-earnings ratios, to bring objectivity to your analysis. Also, think ahead about how you should respond if a position exceeds your expectations or suffers a surprise decline.

The recent past may be fresh in your mind, but putting it in the proper context can keep it from having an undue influence on your investments.

DO THE RESEARCH
Consider Schwab Intelligent Portfolios™, an automated investment advisory service from Schwab Wealth Investment Advisory, Inc. that helps you take the emotion out of investing. Visit schwab.com/OIintelligentportfolios to learn more.

Schwab Intelligent Portfolios is made available through Schwab Wealth Investment Advisory, Inc. (“SWIA”), a registered investment advisor. Portfolio management services are provided by Charles Schwab Investment Advisory, Inc. (“CSIA”). SWIA and CSIA are affiliates of Charles Schwab & Co., Inc. (“Schwab”) and subsidiaries of The Charles Schwab Corporation.

See page 42 for important information.
(0316-DWFB)
Designating beneficiaries on your investment accounts can easily slip to the bottom of your to-do list. But this task shouldn’t be forgotten. It can help protect a sizable portion of your estate and ensure that your assets go to the right people once you pass away.

Here’s why beneficiary designations should play an essential role in your estate plan:

- **They’re powerful.** You can specify who should inherit your retirement and life insurance assets without making adjustments to your will or trusts. In fact, these designations take precedence over wills and trusts in most cases.

- **They’re probate-proof.** Because these designations supersede will and trust instructions, they circumvent the probate process and ensure that assets can be transferred to heirs without delay.

- **They’re simple.** Many institutions offer the convenience of updating these beneficiary designations online.

And here’s when you should consider making updates to your designations:

- **Family changes:** Marriage, divorce, the birth of a child or grandchild, the loss of a spouse—all these events can prompt a change in beneficiary decisions. Keeping your beneficiaries up to date ensures that you don’t inadvertently leave money to the wrong people or leave a loved one out of your plan.

- **Money moves:** If you recently rolled over a 401(k) from a former employer or transferred an existing IRA to a new financial firm, your beneficiary designations won’t transfer over with your assets. Make sure you take the time to specify them again.

See page 42 for important information.

(Yield to What?)

4 ways to measure the potential return on a bond.

When buying a bond, you want to know how much return you’ll get. A bond’s yield is a measure of expected return—based on its coupon, price and other factors. But understanding bond yields can be tricky. First, because bond prices fluctuate based on changes in interest rates, yields are constantly in motion. Second, there are several ways to calculate yield. Let’s look at four of them:

1. **Current yield** is the most straightforward measure. It divides the bond’s annual interest payments by the price you paid for it. But unfortunately, it doesn’t tell the whole story, as it doesn’t take into account the return of principal, which happens when a bond matures, is sold or is called. For example, if you buy a $10,000 bond for the discounted price of $9,500, you’ll record a $500 gain when the bond matures—but the current yield doesn’t factor in those gains.

2. **Yield to maturity** measures the annual rate of return you would receive on a bond investment were you to hold it to maturity—taking into consideration all interest payments, return of principal and the time value of money.

3. **Yield to call** measures the annual rate of return on a bond assuming that the bond is redeemed on the first (or next) call date.

4. **Yield to worst** measures the lowest potential return you might get from a bond without the issuer actually defaulting. It is the lower of the yield to maturity or yield to call.

So which yield matters most? It depends on whether the bond is callable or not. For a callable bond, the yield to call or yield to worst would let you determine your lowest potential return. For a noncallable bond, yield to maturity is the most useful because, barring default, you’ll get back the principal when it matures.

CALL US
For help with your bond investments, call 866-893-6699 to speak with a Schwab Fixed Income Specialist.

See page 42 for important information.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks, including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors.

(Yield to What?)
The Role of Various Asset Classes

At the most basic level, a well-diversified portfolio contains different types of equity, fixed income, commodities and cash investments. Each of these asset classes plays a unique role in your portfolio. By adjusting how much you own of each asset class, you can help fine-tune the risk/reward potential in your portfolio to create a mix that suits your goals and time horizon.

**GROWTH & INCOME**

Growth and income will come from dividend-paying stocks, as well as yield-oriented securities. These securities offer the potential for both high returns and yield with a high degree of risk.

REITs are stocks that invest in real estate directly, either through properties or mortgages. REITs receive special tax considerations and typically offer investors high yields with commensurate risks.

**INFLATION PROTECTION**

Inflation protection is the ability to minimize the corrosive impact of inflation on the value of your investments. It can come from commodities and inflation-protected bonds.

**Core asset classes**

- Equities
- Fixed income
- Commodities
- Cash

**HOW MUCH OF EACH ASSET CLASS SHOULD I HAVE IN MY PORTFOLIO?**

Here are three sample portfolios, which put the asset classes together in various combinations—reflecting different risk levels, income needs and time horizons.

**Conservative**
For investors who seek current income and stability and who are less concerned about growth.

- 58% Fixed income
- 12% Commodities
- 30% Equities

**Moderate**
For long-term investors who don’t need current income and want some growth potential. Likely to experience some fluctuations in value but may have less volatility than the overall stock market.

- 46% Fixed income
- 45% Commodities
- 5% Equities
INCOME
Income will come from a broad array of fixed income investments, which carry varying degrees of risk.

GROWTH
Growth will come primarily from equities, which have historically delivered the highest returns, with a correspondingly higher risk.

DEFENSIVE
Defensive assets generally have low correlations—don’t move in tandem—with equities. They tend to perform well when there is downward pressure on equities.

Aggressive
For long-term investors who want high growth potential and don’t need current income. May experience substantial year-to-year volatility.

LET’S TALK
Call us at 888-484-5340 to discuss your asset allocation.

See page 42 for important information.
Past performance is no guarantee of future results. Diversification strategies do not ensure a profit and do not protect against losses in declining markets. Investing involves risks, including loss of principal. Source: Schwab Center for Financial Research. (0316-DNRS)
The Trouble With Track Records
Past performance doesn’t give you the whole picture.

When shopping for new clothes or household goods, how do you decide what to buy? Price is typically an important factor, but so is quality. If you’re familiar with a brand and satisfied with how its products have performed in the past, you’d probably consider buying that brand again in the future.

But when it comes to shopping for mutual funds, past performance is a less helpful indicator of future performance. That’s because it’s difficult to determine whether fund performance is due to the manager’s skill or to sheer luck. Typically, what separates good performance from bad during distinct market periods is how funds differ in their investment style and approach to risk. For example, growth-oriented funds tend to do well when the economy is expanding and suffer during low-growth periods or recessions.

These factors help explain why so few fund managers are able to consistently outperform their peers, says Jim Peterson, Chief Investment Officer at Charles Schwab Investment Advisory, Inc. “Even those managers who are highly skilled may face other obstacles, such as high expense ratios that are difficult to overcome or a success-fueled influx of new assets that spreads returns too thin,” he says.

Jim advises taking a more nuanced view when evaluating mutual funds.

- **Consider different return periods.** One-year returns can capture momentum in certain sectors, while longer periods are more likely to show a manager’s skill at selecting securities. Looking across multiple time periods can serve as a good gauge of consistency.

- **Look at a fund’s portfolio holdings.** This can tell you whether the manager is “hugging” or simply copying the fund’s benchmark to keep performance from deteriorating.

- **Compare costs.** It’s always important to understand how a fund’s expense ratio stacks up against similar funds.

Jim’s team at Charles Schwab Investment Advisory considers all of these factors and more when determining which funds will make the Schwab Mutual Fund OneSource Select List®. The team also employs statistical techniques to help differentiate manager skill from luck. “It feels natural to evaluate mutual funds by past performance,” Jim says, “but we have found that identifying truly skilled managers takes more digging.”

**NEXT STEPS**
Ready to research mutual funds? View this quarter’s Mutual Fund OneSource Select List at schwab.com/O1selectlist.

See page 42 for important information.
Investors should consider carefully information contained in the prospectus, including investment objectives, risks, charges and expenses. You can request a prospectus by calling Schwab at 800-435-4000. Please read the prospectus carefully before investing.
Past performance is no guarantee of future results.
(0316-DXRY)
Schwab Private Client™

A wealth management team you control.

Instead of the other way around.

More than just one person, Schwab Private Client offers you a dedicated team. A team that collaborates with you to customize an approach to managing your wealth—now and as your life evolves. You’ll stay informed and always be in control, making all final investing decisions.

Learn more about Schwab Private Client at schwab.com/SPC or ask a Schwab Financial Consultant at your local branch.

Schwab ranked “Highest in Investor Satisfaction With Full-Service Brokerage Firms” in the 2016 Full-Service Investor Satisfaction Study.*

Wealth Management at Charles Schwab  PLANNING | PORTFOLIO MANAGEMENT | INCOME STRATEGIES | BANKING

Wealth management refers to products and services available through the operating subsidiaries of The Charles Schwab Corporation, among which there are important differences including, but not limited to, the type of advice and assistance provided, fees charged, and the rights and obligations of the parties. It is important to understand the differences when determining which products and/or services to select.

*Charles Schwab received the highest numerical score in the J.D. Power 2016 Full-Service Investor Satisfaction Study, based on 6,006 responses from 20 firms measuring opinions of investors who used full-service investment institutions and were surveyed in January 2016. Your experiences may vary. Visit JDPower.com. The Portfolio Consultant, Associate Portfolio Consultant, and other representatives making investment recommendations in your Schwab Private Client accounts are employees of Schwab Private Client Investment Advisory, Inc. ("SPCIA"), a registered investment advisor and an affiliate of Charles Schwab & Co., Inc. ("Schwab"). Charles Schwab & Co., Inc., Schwab Private Client Investment Advisory, Inc., and Charles Schwab Bank are separate but affiliated companies and subsidiaries of The Charles Schwab Corporation. Brokerage products are offered by Charles Schwab & Co., Inc., Member SIPC. Deposit and lending products are offered by Charles Schwab Bank, Member FDIC and an Equal Housing Lender.

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC. C00958468 (0516-G2VL) ADP91290D-00 (06/16)
Dear Carrie,

My husband and I are both 64 years old and still working. Because his salary is quite a bit higher than mine, he planned to “file and suspend” his Social Security benefit in two years so that I could collect a spousal benefit while his own benefit continued to grow. We understand that is no longer allowed, but we haven’t been able to come up with a new strategy. Can you help?

—A Reader

Dear Reader,

I think it’s fair to say that last year’s Budget Act dramatically shifted the landscape for couples attempting to maximize their Social Security benefits. Just when many of us had plans in place, we’ve been forced to reevaluate.

Let’s start by outlining what’s changed.

No more file and suspend

First, as you indicate, the old “file and suspend” strategy is gone for all Social Security recipients. In the past, one spouse could file for benefits, which would allow the other spouse to file for a spousal benefit; then the first spouse would suspend his or her own benefit, allowing it to grow. Now, when a married person suspends his or her own benefit, the benefits of the other spouse are also suspended. This effectively prevents one spouse from collecting benefits on the other spouse’s record while at the same time accruing delayed retirement credits.

Further limitations on a restricted application

The “restricted application” provision allows one spouse to collect a benefit based on the other spouse’s work record as opposed to his or her own record—but only after the other spouse files for benefits. That option hasn’t been completely eliminated, but whether or not you can use it depends on your age. The good news for those who were born before January 1, 1954, is that they are grandfathered into this provision. However, anyone who is younger is not eligible.

In this way, at full retirement age (66 for those born between 1943 and 1954), a married person can file for a spousal benefit only (a restricted application) and then switch to his or her own increased benefit at a later date.

Couples strategies that still work

So where does this leave you—and the millions of other couples who are grappling with the new rules? There’s no one recommendation because each...
couple’s financial situation, birth dates, relative ages, anticipated longevity, and earnings records all factor in. Because of this complexity, it generally makes sense to consult a financial advisor before making a decision. Following, though, are a few guidelines:

A primary breadwinner should consider delaying filing to age 70. Assuming good health and the prospect for a long life, this delay makes sense for a couple of reasons. First, it can eventually add up to a larger lifetime benefit. And second, it will mean an increased benefit for a surviving spouse.

It often makes the most sense for lower-earning spouses to file for their own benefit at full retirement age. The tactics will vary, however, depending on birth date:

- If the higher earner did not turn 62 by the end of 2015, and is therefore not eligible to file a restricted application, the lower earner should still consider filing for his or her own benefit at full retirement age. Higher earners should file at age 70, at which time lower earners can switch to a spousal benefit if it is higher than their own benefit.

Alternatively, if both partners have equivalent earnings records, it may make sense for both to delay filing until age 70—provided that both anticipate a long life and can afford to postpone benefits. In this way, they maximize both retirement benefits for themselves and survivor benefits for each other.

Married couples with a single income face a different set of issues. Although health and anticipated longevity certainly come into play, it often makes sense for the breadwinner to postpone benefits until age 70. The couple will forgo spousal benefits until the earner files, but it will also allow for the largest possible retirement and survivor benefits. Other couples, however, may want the earner to file once the spouse reaches full retirement age, which is when the spousal benefit maxes out. In this case, though, they are forfeiting the highest survivor benefit.

No easy answers
So there you have it—or at least a taste of it. While the new law in some ways simplified things, in other ways it just made everything more complicated. I strongly advise every person approaching retirement age to stop and carefully assess their Social Security choices. Timing is important and there are still strategies—especially for couples—that can result in a higher overall benefit. Sit down with your advisor to run different scenarios and consider the trade-offs. It’s well worth it.

Carrie Schwab-Pomerantz, CFP®, is President of Charles Schwab Foundation and Senior Vice President of Schwab Community Services at Charles Schwab & Co., Inc.

See page 42 for important information.

Charles Schwab Foundation is a 501(c)(3) nonprofit, private foundation that is not part of Charles Schwab & Co., Inc., or its parent company, The Charles Schwab Corporation. (0316-E6V4)
China’s New Design
How will its economic transition affect sectors?
BY BRAD SORENSEN

For decades, manufacturing was the backbone of China’s economy, to the extent that “Made in China” became shorthand for inexpensively produced factory goods. But in recent years, China has begun a great restructuring project: it’s trying to shift its massive economy away from manufacturing and heavy industry, and toward consumer spending and services.

In the long run, this plan makes sense. China’s rise as a manufacturing powerhouse relied on having a surplus of laborers willing to work for lower wages than the competition overseas. But China’s working-age population—generally defined as those between ages 15 and 64—is peaking, and is expected to decline in coming years. China’s economy is also doing what economies typically do as they mature: rapid growth inevitably slows, rising worker incomes support an expanding middle class, and future growth relies increasingly on consumer spending and business productivity.

What does this mean for U.S. investors? As with any major change, the transition could be bumpy. We’ve already seen the U.S. stock market swoon—more than once over the past year—amid fears about China’s slowing economic growth, its volatile stock market and the sinking value of its currency.

There are a lot of ways to look at the effects of China’s transition, but one that may be useful for investors is the potential impact on equity sector performance. Some sectors may suffer as demand wanes for commodities and products typically used in Chinese manufacturing. On the other hand, as Chinese workers move from rural areas and factory jobs to cities and white-collar careers, demand may grow for goods and services, such as apparel, entertainment, travel and restaurants.

Let’s look more closely at some of the sectors that may be affected by China’s transition.

At risk: materials and energy
Six years ago, China’s official government-reported growth rate was more than 12%; today it’s less than 7%. Most of that decline has come at the expense of the two sectors most vulnerable to a slowdown in Chinese manufacturing: materials and energy.

China’s manufacturing slowdown has cut demand for industrial commodities, such as copper, aluminum and iron ore. Technological advances and a buildup of production facilities are also allowing China to produce more of its own materials—for instance, it recently transitioned from being a net importer to a net exporter of steel. Global prices for those commodities have fallen, and this decline hurts the earnings of the companies that mine and sell them around the world.

It’s worth noting that companies feel the effect of lower prices even if they don’t sell directly to China—in a global market, reduced demand from one country can have a global effect on prices.

As China’s growth has slowed, its demand for crude oil has softened as well, contributing to the steep drop in global oil prices from mid-2014 to early 2016 and the subsequent drag on earnings for companies in the energy sector. Given that China is the world’s second-largest oil consumer (after the United States), slackening demand from China can have a big impact on oil prices. But keep in mind that demand is just one issue that affects oil prices—
oversupply from oil-producing countries, including Saudi Arabia, Russia, Iran, Libya and the United States, can play a role, too.

**Potential opportunities: technology, consumer discretionary**

China has major environmental problems, largely as a result of its rapid manufacturing-fueled growth. It now leads the world in carbon emissions, and air pollution in its major cities poses a danger to public health. After years of paying lip service to its pollution problems, China has begun to invest in environmental improvement projects. In 2014, China reportedly spent $90 billion on solar power, wind power and other renewable energy technology—a sum representing more than a quarter of total global spending in the renewable sector that year. This trend toward increased investment, if sustained, could provide opportunities for companies operating in the "green" space, which largely involves the energy and technology sectors.

Technology in general may benefit from China's changing economy. China is extremely interested in keeping business within its borders, usually allowing Chinese companies to have the upper hand over foreign companies. However, Chinese companies often lack the know-how to create the technology they need to be globally competitive. They may reverse engineer products from overseas. But given the rapid pace of technological change, by the time Chinese companies can copy foreign products, the tech world often has moved on. If they begin to buy more technology products from abroad, the greatest potential benefits will likely be enjoyed by hardware manufacturers. By its nature, hardware is less affected by cultural differences than software, and hardware is also more difficult for Chinese companies to replicate efficiently.

Consumer discretionary companies are also likely to benefit from China's shift toward a consumer-based economy. China's middle class is growing, especially in large cities, such as Beijing and Shanghai. These increasingly affluent consumers are interested in luxury goods, dining, entertainment and travel. China's government has taken steps to boost consumer spending; for instance, in June 2015, it slashed duties by an average of 50% on imports such as shoes, cosmetics and clothes, items that many Chinese consumers had been traveling abroad to buy. China also has become more open to foreign ownership, encouraging a growing footprint for foreign retailers, restaurants and e-commerce companies. Meanwhile, rising Chinese tourism benefits foreign hotels, restaurants, casinos and attractions even if they don't have locations in mainland China.

Western companies’ dreams of tapping into a massive potential Chinese consumer base have not yet fully become reality. However, investors should be patient. While investment risk tends to be elevated in China—as in any state-run economy—there are opportunities to be found as the world's second-largest economy shifts direction.

Brad Sorensen, CFA®, is Managing Director of Market and Sector Analysis at the Schwab Center for Financial Research.
Bonds or Bond Funds?
How to decide what’s best for your portfolio.

BY ROB WILLIAMS

The case for bonds is likely familiar to most investors. If a portfolio were a ship, bonds would be the ballast—providing a measure of stability. They’re a counterbalance to riskier investments like stocks, and can help you manage volatility over time. And because bonds can also provide steady, predictable cash flows, they’re useful for income planning in retirement.

Less clear perhaps is the best way to add bonds to your portfolio. Do you buy individual bonds? Bond funds? Some combination of the two?

In general, both bonds and bond funds provide income and diversification from stocks. But it’s worth weighing the differences before you choose.

As with any investment, what works best for you will depend on your preferences, your goals and your response to different kinds of risk. So let’s take a closer look at some of the key qualities of bonds and bond funds and consider some situations where one or the other might make sense.

Individual bonds
Most investors are drawn to individual bonds because of the reliable source of income they provide. Bonds are issued by governments, businesses and other organizations, and usually make interest payments for a set number of years. When you buy a bond, you generally receive an interest payment every six months and then the bond’s face value, or principal, when it matures.

Bonds’ regular payments and predetermined life spans make them appealing for people who want to plan for predictable cash flows. If you know you’ll need a certain amount of money each year or would like to recover your principal at a certain date, bonds can be very useful.

The market value of the bond may fluctuate throughout its life, depending on changes in interest rates, overall credit quality of the issuer and other factors. However, you receive a set promised “par” amount when the bond matures. When you buy a bond, you may pay a commission and a markup on the price of
the bond (the difference between the dealer’s purchase price and the price at which it is sold to the investor).

A risk with bonds is that the issuer might miss a payment, or even fail to return the principal (known as “default”). Historically, these problems are rare for bonds with high credit ratings from a major rating agency, but you should still pay close attention to the issuer’s credit quality.

Some bonds can also be redeemed, or “called,” prior to maturity. In this case, you would receive the call price, which is set when the bond is issued and could be less than the price you paid for the bond. If you wanted to replace the lost income, you might find that interest rates on new, comparable bonds are lower.

Investors in individual bonds should also consider these features:

- **Diversification.** Research by the Schwab Center for Financial Research found that holding investment-grade bonds from 10 or more issuers greatly improved portfolio diversification. That can mean investing $100,000 or more to build a diversified corporate or municipal bond portfolio (assuming $10,000 per bond). Your portfolio shouldn’t have too much exposure to a particular issuer, sector or type of bond. Also, make sure you understand each issuer and each bond to see if they match your goals and risk tolerance.

- **Liquidity.** If you should need to liquidate a bond before it matures, it can sometimes be challenging to find a buyer. Some types of bonds can be thinly traded at times, and there’s no guarantee that someone will want to buy a bond at the price you are asking for it.
Bond funds

Bond mutual funds hold multiple bonds and can be managed either actively by an investment manager or passively to replicate an index, such as the Barclays U.S. Aggregate Bond Index.

Bond funds can also focus on broad or narrow parts of the market. But in general, holding multiple bonds adds a level of diversification, because multiple bonds involve multiple issuers and maturities. For example, corporate and municipal bond funds rarely limit their holdings to fewer than 30 issuers, and often own hundreds. It can be difficult for investors to replicate this diversification with individual bonds.

Shares are valued based on the fund’s net asset value (NAV), which is basically the value of all its bond holdings divided by the number of fund shares in circulation. Price of the shares in the fund can rise or fall a little each day according to the fund’s NAV. However, monthly income payments to fund investors are generally the main source of return for bond fund holders. (Bond funds typically make payments to investors monthly rather than every six months, as individual bonds do.)

Bond funds trade on a regular exchange, so you know the price you’ll receive if you need to sell shares in a bond fund on any given day. The fund’s management fee can be found in its prospectus. As an example, low-cost bond funds usually have management fees ranging from 0.3% to 0.6% per year. Passively managed funds, including many exchange-traded bond funds, can have even lower management fees.

Bond fund managers may be able to buy bonds at better prices than an individual investor because they buy larger blocks. And bond fund management companies may also have dedicated research departments that handle security selection and monitoring, which can be particularly helpful if an investor wants access to an unfamiliar or complex part of the market.

Another potential advantage bond funds have over individual bonds is that they may make it easier to set up automatic investment plans and to reinvest interest payments. With a no-load, no-transaction-fee bond fund, you can regularly contribute smaller amounts to build your investment over time, whereas building up an investment in higher-cost individual bonds might be more difficult.

Some other considerations:

- Fund prices and yields move constantly, so your income may fluctuate. Again, market conditions and changing holdings can affect the value of fund shares.
- Most funds don’t mature, so you don’t receive a promised set amount at a future date. If you need to sell your fund shares when markets are down, you could face losses.
- Funds are always buying and selling bonds, which can affect your taxes. Fund managers pass capital gains or losses on to investors.

What if interest rates rise?

When interest rates rise, bond prices fall. If you own individual bonds and are planning to keep them until they mature, this may not concern you. Barring a default, you’ll continue to receive interest payments and then the principal or promised “par” amount at maturity. The only consideration might be the opportunity cost of not being invested in new, higher interest rate bonds.

With a bond fund, rising rates are likely to prompt a short-term price drop. However, a fund manager can react to changing interest rates by buying and selling bonds to try to maximize coupon income. For instance, a manager may sell lower-coupon bonds and use the proceeds to buy bonds with higher coupons, or may reinvest the income payments from individual bonds into higher-yielding bonds. Over time, this may increase the income generated by the fund.

Be aware, though, that if you need to sell a bond fund during a period when rates rise, the value of the fund may be lower than the price when you purchased the fund. Short-term bond funds tend to be less sensitive to changing interest rates than other types of...
bond funds, so consider those—or other, less volatile investments—if you think you may need to sell shares in a bond fund soon.

What to do now?
Whether you’re looking for steady income, potentially lower volatility or greater portfolio diversification, bonds or bond funds can help. To determine which is right for you, think first about your attitude toward risk, how actively you want to participate in managing your portfolio and how much you’d like to invest.

And remember, this doesn’t have to be an either/or decision. The relative predictability of individual bonds can make sense in lower-risk areas of the market, such as Treasuries, municipal bonds and investment-grade corporate bonds. The easier management and diversification possible with bond funds can be appealing in areas where risks are higher, like high-yield/subinvestment-grade corporate bonds and international bonds. You may find that combining the two can help you meet your goals.

Rob Williams is Managing Director of Income Planning at the Schwab Center for Financial Research.

How do they stack up?
Bonds vs. bond funds

<table>
<thead>
<tr>
<th></th>
<th>Individual bonds</th>
<th>Bond funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income payment frequency</td>
<td>Usually semiannually</td>
<td>Monthly</td>
</tr>
<tr>
<td>Purchase</td>
<td>Buy from a broker</td>
<td>Buy on an exchange</td>
</tr>
<tr>
<td>Management</td>
<td>Investor managed</td>
<td>Professionally managed</td>
</tr>
<tr>
<td>Diversification</td>
<td>Little to none; Schwab recommends holding bonds from 10 or more investment-grade issuers to improve diversification</td>
<td>Invests in multiple bonds so generally provides diversification; Schwab recommends using bond funds for diversification with speculative-grade bonds and other higher-risk issuers</td>
</tr>
<tr>
<td>Cost</td>
<td>Brokerage commissions and the markup/markdown on the price of a bond</td>
<td>Brokerage commissions, if any, and annual expenses that cover management and other fees</td>
</tr>
<tr>
<td>Maturity</td>
<td>Set period, with a possibility of early “call” dates</td>
<td>Generally don’t mature</td>
</tr>
<tr>
<td>Credit risk</td>
<td>Highly rated bonds from major credit agencies have historically had a low default rate</td>
<td>Hold multiple bonds so credit risk is diversified</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Liquidity varies, depending on the market and type of bond</td>
<td>More liquid than bonds</td>
</tr>
</tbody>
</table>

Source: Schwab Center for Financial Research.

CONTACT US
For help with your bond investments, call 866-893-6699 to speak with a Schwab Fixed Income Specialist.
A Look Under the Hood
ETFs are generally tax efficient but in a few notable cases, they aren’t.

BY MICHAEL IACHINI

Mutual funds—especially actively managed stock mutual funds—are often tax inefficient. This is because most buy and sell stocks frequently, and they have to pass on any profits from those trades to their shareholders in the form of a capital gains distribution. As a shareholder, you pay taxes on those distributions.

But what about exchange-traded funds (ETFs)? They certainly have a reputation for tax efficiency. And overall, compared with most actively managed mutual funds, stock ETFs do tend to be much more tax efficient. So why is that the case, and what are the exceptions to this rule?

Most ETFs track indexes
If your fund aims to match the performance of an index, especially a traditional market-capitalization-weighted index (where the biggest companies by market value have the most weight), that fund doesn’t need to do a lot of trading. It’s simply mimicking the holdings of an index, which don’t change frequently. This means fewer opportunities for the ETF to sell a stock for a gain, and by extension, fewer chances that you’ll have to pay taxes on those gains. (Note that index mutual funds tend to be tax efficient, too, for the same reasons.)

ETFs have a structural advantage
Every time an investor puts money into a mutual fund or takes money out of it, it’s up to the fund manager to accommodate that money. So if a lot of investors want to sell their mutual fund shares, the fund manager will probably have to sell some stocks to raise cash, which can mean capital gains distributions for the shareholders who stay in the fund.

ETF shares, by contrast, usually change hands in the secondary market, from one investor to another. If a lot of ETF shareholders want out of the fund, they simply sell their shares to someone else, and the ETF manager doesn’t have to get involved. Furthermore, if enough people sell their ETF shares, the price might fall to the point where the ETF is trading more cheaply than the per-share value of the underlying stocks. At this point, a big investor called an authorized participant (AP) will likely buy the less expensive ETF shares and swap them with the ETF manager for the underlying stocks, which the AP can then sell. This is good for ETF investors in two ways:

• This buying up of ETF shares helps push the ETF’s price back toward the per-share value of the stocks in the fund.
• When the ETF manager swaps the underlying stocks, he or she can give away groups of those stocks that have the biggest baked-in capital gains. That way, if the ETF manager ever does sell those stocks, the capital gains realized will be smaller.

Exceptions to the rule
Now, just because a fund is structured as an ETF doesn’t mean you’ll never pay taxes while you own it. Here are some cases where ETFs aren’t super tax efficient (though they still have that structural tax advantage compared with mutual funds).

• Bond ETFs: If the ETF owns bonds that pay a lot of interest, it has to distribute that interest to you, and you have to pay taxes on it. Of course, if you’re buying a bond ETF, you probably want that interest income. Keep in mind that high-yield-bond ETFs generally distribute more taxable interest than investment-grade-
See page 42 for important information. Investors should consider carefully information contained in the prospectus, including investment objectives, risks, charges and expenses. You can request a prospectus by calling Schwab at 800-435-4000. Please read the prospectus carefully before investing. Some specialized exchange-traded funds can be subject to additional market risks. Investment returns will fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost.

©Getty Images

Michael Iachini, CFA®, CFP®, is Managing Director of Mutual Fund and ETF Research at Charles Schwab Investment Advisory, Inc.
Tapping the Experts

Four Schwab professionals discuss the elements of a successful trading strategy.

Successful trading isn’t just about picking the “right” stocks; it’s also about carefully plotting out your strategy and sticking to it. Even so, we often find that’s easier said than done. So we asked our Schwab trading experts what they think makes a successful strategy, how they go about implementing it and how to avoid the most common pitfalls.
**Q:** How do I know which stock to buy?

**Randy Frederick:** Start with a rating system and use it to weed out stocks that don't fit your parameters. With Schwab Equity Ratings®—our proprietary stock-rating system that uses a simple A–F scale—you can take a universe of a few thousand stocks and whittle it down to a couple of hundred just by ruling out anything with less than a B rating. You can then use fundamental analysis (research gathered from a company’s financial statements) or technical analysis (research drawn from examining chart patterns) to narrow the list further. Once you have identified a good stock to trade, consider using technical analysis to decide when to get in and what price you'd like to pay for it.

**Lee Bohl:** I like to buy stocks that are highly rated by Schwab Equity Ratings with positive technical signs. For example, I look for up-trending stocks that are trading above both their 20-day and 50-day simple moving averages. In my view, it's also a good indicator when the near-term volume (5-day average volume) is greater than the longer-term volume (20-day average volume or 6-month average volume, depending on trade time frame) because it may indicate that the trend will continue.

**Q:** How do I keep from selling a stock too soon?

**LM:** The best way to try to avoid this is to know exactly why you bought the stock and what you want to get out of it. When people don’t establish those parameters ahead of time, they tend to let their nerves get the best of them.

**KH:** A trailing stop order is the best tool available to help sell at the most opportune time. It sets the stop order at a specified amount below the market price. To reduce the likelihood of being stopped out early and selling too soon, review the stock’s average true range (ATR) for a time frame that is consistent with the trade you have in place. For example, if a stock’s 15-day ATR is $1, that means it’s averaged a $1-a-share spread for the prior 15 trading days. In that case, I want 1.5 to 2 times that amount as my trail to limit my chances of being stopped out.

**Q:** How should traders respond to market volatility?

**RF:** I like to make smaller trades when volatility flares up, because volatility can increase risks.
While smaller trades will mean decreased profit opportunities, there's also a lower risk of losses.

KH: Volatile markets require even more discipline. I think it's important to pay attention to what the stock is telling you; wider swings could mean more risk. Yes, volatility can work in my favor, but volatility can also leave me in an uncomfortable position rather quickly.

Q: What should I include in my trade plan?
LB: I believe that the most important component of the plan is your exit criteria for a trade—both when the trade is going for you and when it's going against you. In addition, you should establish your time frame for the trade and whether you're going to rely on fundamental analysis or technical analysis to help make buy or sell decisions.

LM: Your trade plan needs to address whether you're buying something as a short-term trading idea or a long-term investing idea. All too often, traders buy a stock as a trading opportunity and then let it transition into a long-term investment when it goes against them. In addition to an exit strategy, your plan should set a risk/reward ratio. This puts you in control of the trade by defining both how much you expect to make on a trade and how much you are willing to lose. For example, I look for a risk/reward ratio of roughly 1:3. This means that I'm comfortable risking $1 to potentially make $3.

RF: Some people will trade a product or strategy that they don't understand. They will put real money on the line and then do the research to find out how they lost it. My advice is to do the research up front.

KH: Sometimes I see investors make trades based on the news or a market event. Instead, keep notes about your exit strategy the day you make a trade, and then follow that strategy. This allows you to make decisions based on chart analysis rather than rely on your emotions.

Q: What are the habits of successful traders?
LB: First and foremost, stick to your trade plan. On top of that, maintain a trade journal and review your trades. Jesse Livermore, who traded during the early 20th century, was one of the greatest stock speculators of all time. At the end of each year, he would go down to his bank and lock himself in the vault and review all of his trades from the prior year. Fortunately, modern traders have tools at their disposal to make this process a lot easier. StreetSmart Edge enables you to take pictures of charts and take notes. Make use of them whenever you get into or out of a trade and revisit your notes later to understand why something did or didn't work.

LM: Successful traders don't gamble. In order to trade for the long term you need to understand what’s at stake and have a method for managing risk. Having a disciplined risk management strategy is what will keep you trading for many years to come.
SCREENING SMART BETA

5 questions you should ask before investing in a smart beta strategy.
These are some of the names used to describe a large and diverse group of passive investing strategies. What distinguishes these strategies is their use of “alternative” approaches to screening and weighting securities.

“Alternative to what?” you might ask. A traditional index like the S&P 500® Index is basically a list of stocks ranked by market capitalization (market cap), or the total market value of the underlying company’s outstanding shares. This is determined by multiplying the stock price by the number of shares in the market. Thus the most valuable companies will receive the largest weightings.

Investing strategies based on such indexes follow a similar logic. If the largest-cap stock accounts for 5% of a market-cap index, then a strategy based on that index will have a 5% allocation to that stock.

Smart beta strategies use other methods to rank investments. Some screen stocks based on “fundamental” factors, such as the underlying companies’ sales, cash flows and dividends-plus-buybacks. Stocks with better fundamental scores will rank higher and get larger portfolio weightings. Some strategies give the least volatile stocks the largest weightings. Others give all the stocks in a market-cap index an equal weighting, which can tilt the strategy toward stocks with lower market cap than those at the top of the list. There are many different styles—and they all ignore traditional market-cap weightings.

Why? That depends on the strategy. Some seek higher returns than market-cap strategies, after allowing for risk. (After all, market-cap indexes are typically the yardsticks used to measure market performance, so a market-cap strategy will generally just replicate whatever the market is doing.) Other smart beta strategies aim for less volatility.

“Not all smart beta strategies are created equal,” says Anthony Davidow, Asset Allocation Strategist at the Schwab Center for Financial Research. “Depending upon the weighting methodology, investors may achieve very different results over time.”

Investors considering a smart beta strategy should start by asking these five questions:
1 **What is the strategy trying to achieve?**

The smart beta universe is broad, deep and diverse, so investors should be clear about what a particular strategy seeks to achieve, and how it aims to achieve it.

Morningstar estimates there are now more than 900 different exchange-traded products based on such strategies, and it groups them in three buckets: return-oriented strategies, risk-oriented strategies and other.

As Table 1 shows, the strategies within each classification can vary widely. To pick just a few:

- **Dividend-screened/-weighted strategies** rank stocks by dividend yield.
- **Fundamentals strategies** rank and weight stocks using the fundamental factors as referenced above. Note: There may be differences among fundamental index strategies depending upon the factors used.
- **Momentum strategies** rank stocks by recent price appreciation, with a focus on fast risers.
- **Minimum volatility/variance strategies** focus on less volatile stocks.

Each strategy focuses on a particular attribute or set of attributes, and whether you’re looking for potential market-beating returns, lower volatility or increased diversification, you should be able to find one that meets your needs.

2 **What is the underlying index?**

Smart beta strategies are generally passive investments, meaning they attempt to track the performance of a particular index. Knowing the index on which a strategy is based can give you a sense of which securities it will invest in.

One simple way to illustrate this is to imagine two equal-weight strategies, one tracking the S&P 500 Equal Weight Index and another tracking the Russell 1000® Equal Weight Index. Both strategies would offer broad exposure to the market. However, where the former strategy might invest in all 500 stocks in the S&P 500 (with each stock having a 0.2% weighting), the latter might try to include all 1,000 of the stocks in the Russell 1000 (with each stock having a 0.1% weighting). As you might expect, such differences—which apply no matter what type of strategy you’re considering—can affect performance.

3 **What are the sector allocations?**

Smart beta strategies generally employ a rules-driven approach, wherein the weighting methodology determines what investments are included and in what proportion. One outcome of this approach is that some strategies might be more exposed to certain sectors than others.

Table 2 on page 26 shows how seven different smart beta strategies compare with two market-cap indexes in terms of sector exposure. The PowerShares S&P 500 Low Volatility strategy demonstrates how a particular weighting methodology can result in different sector exposures. It has a relatively large exposure to the financials, consumer staples and utilities sectors. Historically, these sectors have been less volatile than others.

Again, this shouldn’t be taken to mean a particular strategy is betting on a certain sector, as an active fund manager might. Rather, if a strategy gives low-volatility stocks a higher weighting, and the financial, consumer staples and utilities sectors have all tended to be less volatile, then the strategy might end up with larger weightings in those sectors. And the sector allocations can change, so if volatility picked up in one of them, its weighting in a low-volatility index would likely shrink.

The bottom line for investors is to make sure they understand their sector exposure; that way they can avoid any unintended concentrations in particular parts of the market.
What is the allocation across value, growth and core stocks?

Investors should also be aware of how different strategies can lead to concentrations in growth or value stocks.

- Value stocks are generally those considered undervalued based on economic factors.
- Growth stocks are generally those considered highly valued because of expectations that earnings will rise sharply in the future.
- Core stocks exhibit both value and growth characteristics.

Table 3 on page 27 shows how certain strategies can result in different exposures. For example, the three strategies that look at different fundamentals—the Schwab Fundamental U.S. Large Company, iShares MSCI USA Momentum Factor (MTUM), First Trust Large Cap Core AlphaDEX® Fund (FEX), Guggenheim S&P 500 Equal Weight ETF (RSP), PowerShares FTSE RAFI US 1000 Portfolio (PRF), PowerShares S&P 500 Low Volatility Portfolio (SPLV), WisdomTree LargeCap Dividend Fund (DLN), Russell 1000 Index, and S&P 500 Index—distribute their investments across various sectors differently, as shown in Table 2:

<table>
<thead>
<tr>
<th>Name</th>
<th>Materials</th>
<th>Consumer discretionary</th>
<th>Financials</th>
<th>Consumer staples</th>
<th>Health care</th>
<th>Utilities</th>
<th>Telecom</th>
<th>Energy</th>
<th>Industrials</th>
<th>Info tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schwab Fundamental U.S. Large Company</td>
<td>3.53</td>
<td>12.52</td>
<td>13.84</td>
<td>12.00</td>
<td>10.96</td>
<td>4.38</td>
<td>4.11</td>
<td>13.93</td>
<td>10.33</td>
<td>14.41</td>
</tr>
<tr>
<td>iShares MSCI USA Momentum Factor</td>
<td>1.05</td>
<td>29.79</td>
<td>8.64</td>
<td>16.34</td>
<td>12.03</td>
<td>0.18</td>
<td>0.22</td>
<td>0.53</td>
<td>5.85</td>
<td>25.37</td>
</tr>
<tr>
<td>First Trust Large Cap Core AlphaDEX® Fund</td>
<td>5.35</td>
<td>20.30</td>
<td>12.79</td>
<td>8.06</td>
<td>7.95</td>
<td>8.42</td>
<td>0.94</td>
<td>7.65</td>
<td>14.17</td>
<td>14.40</td>
</tr>
<tr>
<td>Guggenheim S&amp;P 500 Equal Weight ETF</td>
<td>5.31</td>
<td>16.59</td>
<td>17.49</td>
<td>7.65</td>
<td>11.37</td>
<td>5.96</td>
<td>1.01</td>
<td>7.97</td>
<td>13.15</td>
<td>13.49</td>
</tr>
<tr>
<td>PowerShares FTSE RAFI US 1000 Portfolio</td>
<td>3.36</td>
<td>11.36</td>
<td>22.30</td>
<td>10.02</td>
<td>10.69</td>
<td>5.06</td>
<td>3.88</td>
<td>10.25</td>
<td>10.47</td>
<td>12.45</td>
</tr>
<tr>
<td>PowerShares S&amp;P 500 Low Volatility Portfolio</td>
<td>2.14</td>
<td>3.03</td>
<td>27.91</td>
<td>21.43</td>
<td>12.48</td>
<td>11.46</td>
<td>2.27</td>
<td>0.00</td>
<td>16.47</td>
<td>2.82</td>
</tr>
<tr>
<td>WisdomTree LargeCap Dividend Fund</td>
<td>2.51</td>
<td>8.73</td>
<td>15.99</td>
<td>14.81</td>
<td>11.34</td>
<td>4.98</td>
<td>5.99</td>
<td>10.83</td>
<td>10.16</td>
<td>14.67</td>
</tr>
<tr>
<td>Russell 1000 Index</td>
<td>3.05</td>
<td>13.47</td>
<td>17.53</td>
<td>9.23</td>
<td>14.62</td>
<td>3.02</td>
<td>2.29</td>
<td>6.19</td>
<td>10.56</td>
<td>20.05</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>2.76</td>
<td>12.89</td>
<td>16.47</td>
<td>10.06</td>
<td>15.16</td>
<td>2.99</td>
<td>2.43</td>
<td>6.50</td>
<td>10.05</td>
<td>20.69</td>
</tr>
</tbody>
</table>

Source: Schwab Center for Financial Research with Morningstar Direct data as of 12/31/2015. Sector allocations are subject to change without notice.

There is a great deal of variability across the smart beta universe. It’s important to spend the time to know what you own—and how you own it.”

―ANTHONY DAVIDOW, ASSET ALLOCATION STRATEGIST
### Table 3: Market capitalization and style (%)

<table>
<thead>
<tr>
<th>Name</th>
<th>Mega cap</th>
<th>Large cap</th>
<th>Mid cap</th>
<th>Small cap</th>
<th>Micro cap</th>
<th>Value</th>
<th>Core</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schwab Fundamental U.S. Large Company (SFLNX)</td>
<td>46.07</td>
<td>33.34</td>
<td>17.68</td>
<td>2.68</td>
<td>0.24</td>
<td>51.53</td>
<td>30.30</td>
<td>18.18</td>
</tr>
<tr>
<td>iShares MSCI USA Momentum Factor (MTUM)</td>
<td>44.91</td>
<td>37.61</td>
<td>17.49</td>
<td>0.00</td>
<td>0.00</td>
<td>6.74</td>
<td>25.34</td>
<td>67.92</td>
</tr>
<tr>
<td>First Trust Large Cap Core AlphaDEX Fund (FEX)</td>
<td>12.50</td>
<td>41.23</td>
<td>44.40</td>
<td>1.87</td>
<td>0.00</td>
<td>40.46</td>
<td>27.17</td>
<td>32.37</td>
</tr>
<tr>
<td>Guggenheim S&amp;P 500 Equal Weight ETF (RSP)</td>
<td>11.37</td>
<td>39.40</td>
<td>46.58</td>
<td>2.65</td>
<td>0.00</td>
<td>36.37</td>
<td>34.69</td>
<td>28.94</td>
</tr>
<tr>
<td>PowerShares FTSE RAFI US 1000 Portfolio (PRF)</td>
<td>42.66</td>
<td>33.32</td>
<td>18.80</td>
<td>4.64</td>
<td>0.58</td>
<td>50.77</td>
<td>31.55</td>
<td>17.68</td>
</tr>
<tr>
<td>PowerShares S&amp;P 500 Low Volatility Portfolio (SPLV)</td>
<td>16.81</td>
<td>47.01</td>
<td>36.19</td>
<td>0.00</td>
<td>0.00</td>
<td>36.50</td>
<td>36.50</td>
<td>27.00</td>
</tr>
<tr>
<td>WisdomTree LargeCap Dividend Fund (DLN)</td>
<td>56.07</td>
<td>35.66</td>
<td>8.25</td>
<td>0.02</td>
<td>0.01</td>
<td>51.64</td>
<td>32.92</td>
<td>15.44</td>
</tr>
<tr>
<td><strong>Indexes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russell 1000 Index</td>
<td>44.41</td>
<td>33.02</td>
<td>20.26</td>
<td>2.27</td>
<td>0.05</td>
<td>32.54</td>
<td>33.14</td>
<td>34.31</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>50.28</td>
<td>36.34</td>
<td>13.18</td>
<td>0.19</td>
<td>0.00</td>
<td>33.56</td>
<td>33.14</td>
<td>33.31</td>
</tr>
</tbody>
</table>

Source: Schwab Center for Financial Research with Morningstar Direct data as of 12/31/2015. Data is subject to change without notice. Market capitalization may vary without notice. Market-capitalization breakpoints as determined by Morningstar Direct are as follows: mega cap, over $78.3 billion; large cap, between $17.3 billion and $78.3 billion; mid cap, between $3.6 billion and $17.3 billion; small cap, between $1.1 billion and $3.6 billion; micro cap, under $1.1 billion.

PowerShares FTSE RAFI US 1000 Portfolio and WisdomTree LargeCap Dividend Fund—all have relatively more exposure to value stocks, as might be expected given their strategies’ focus.

Meanwhile, the iShares MSCI USA Momentum Factor has a nearly 68% allocation to growth stocks, which makes sense given that momentum and growth tend to be related.

**Look before you leap**

The rise of smart beta strategies has given investors new ways to structure their portfolios using alternative measures of value. Our view is that smart beta and market-cap strategies can complement one another, and that including both types of strategies in a portfolio can help smooth results over time. But as the examples above show, smart beta strategies may aim for very different goals, and even similar-sounding strategies can produce different results.

“‘There is a great deal of variability across the smart beta universe,” says Anthony. “It’s important to spend the time to know what you own—and how you own it.”

**See page 42 for important information.**

Investors should consider carefully information contained in the prospectus, including investment objectives, risks, charges and expenses. You can request a prospectus by calling Schwab at 800-435-4000. Please read the prospectus carefully before investing.

Investment returns will fluctuate and are subject to market volatility, so that an investor’s shares, when redeemed or sold, may be worth more or less than their original cost. Unlike mutual funds, shares of exchange-traded funds (ETFs) are not individually redeemable directly with the ETF. Shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV).

Past performance is no guarantee of future results.

All fund names and data shown above are for illustrative purposes only and are not a recommendation, offer to sell, or a solicitation of an offer to buy any security. Supporting documentation for any claims or statistical information is available upon request.

Schwab Intelligent Portfolios is made available through Schwab Wealth Investment Advisory, Inc., which uses smart beta funds in its portfolios. Visit schwab.com/OIintelligentportfolios to learn more.

**NEXT STEPS**

Consider Schwab Intelligent Portfolios™, an automated investment advisory service from Schwab Wealth Investment Advisory, Inc., which uses smart beta funds in its portfolios. Visit schwab.com/OIintelligentportfolios to learn more.

©David Arky

FALL 2016 • ON INVESTING
Do you and your partner have a good handle on your finances?

The question is an important one for couples to contemplate, says Jennifer DePriest, a Schwab Financial Consultant in the New York–Upper East Side branch.

Although most women are involved in day-to-day financial decisions, research shows that many women bow out of discussions about the couple's long-term plan and investing strategy. This may leave them feeling unprepared if there's a breakup or their spouse passes away. In some cases, women break off the connection with the family's financial consultant when their mate dies—potentially disrupting, or even jeopardizing, their future security.

To ensure that the financial road ahead is a smooth one, “both partners need to make sure they grasp the entirety of their financial picture,” says Jennifer. “Couples should be on the same page—or know what the other is thinking—throughout the entire planning process.”

To keep both partners engaged for the long haul, consider the following five steps.
Review your accounts together
One of the most important aspects of financial planning is knowing where you stand. As part of this process, you’ll want to set time aside to go over your separate and joint account statements. Each partner should have a clear picture of current finances. This will set the stage for deciding what you want to accomplish with your money and how you want to invest it.
Focus on mutual goals

Next, you’ll want to zero in on your goals. What are your top priorities? Saving for a secure retirement? Planning to buy a second home? This can be an excellent opportunity for you and your partner to step back, rethink and agree on what’s most important to you both. As you talk through your shared goals, try to be as specific as possible by including a dollar amount and time frame, Jennifer advises.

Compile a list of questions or issues

Both partners should come up with their own list of concerns and then compare notes. The key is to not make any judgments about the other person’s questions. Women, for example, have specific financial issues to consider, such as a longer life expectancy. Both partners will benefit from being involved in these discussions. If there’s a tendency to let the more knowledgeable partner take the lead, work to balance the scales. If you’re working with a consultant, you will want to schedule time together to have your mutual and individual concerns addressed.

Couples should be on the same page—or know what the other is thinking—throughout the entire planning process.”

—Jennifer DePriest,
Schwab Financial Consultant
Let your consultant mediate touchy issues

Bring your disagreements to the table. “It’s important to meet with your consultant together and separately,” Jennifer says. “Often one spouse has a very different idea about the amount of risk they’re comfortable with, or how much insurance they should have.” Couples can also have different views on spending or different charitable inclinations. The consultant can help partners talk through these issues and arrive at a comfortable agreement.

Monitor your progress together

It’s essential that you both continue to monitor your progress and make adjustments as your goals, priorities and time frame evolve. This can be as simple as a quarterly check-in on your portfolios online or as detailed as an annual financial checkup with your consultant. “What matters is that you make monitoring your progress a scheduled exercise that you do together,” Jennifer says.

Double benefit

And remember that there’s a dual benefit when a couple builds a better financial relationship, Jennifer says. “Working together helps the spouse who is not as involved feel more comfortable with the family’s financial security—and it helps support the spouse who has been bearing most of the responsibility.”

Division of labor

“Even if one person takes more of the lead with financial planning, there are a few key things that the other spouse must know,” Jennifer says.

- The location of all of the assets, including the account numbers and passwords, how they are titled and their beneficiary designations
- The contact information for each account at all the family’s financial institutions, including insurance contracts
- Regular updates on the retirement plan and other important goals, such as education savings
- The plan for the distribution of assets during the couple’s lifetime
- The couple’s estate plan, including wills and any documents related to trusts or powers of attorney

Jennifer has couples complete Schwab’s Asset Inventory Worksheets and suggests that clients put together a binder with this information. Partners should review and update their material every year.

See page 42 for important information.

The Personal Portfolio Review is complimentary, although the implementation of any recommendations made during the consultation may result in trade commissions or other fees, charges or expenses. The Personal Portfolio Review is available only to clients with at least $25,000 in assets at Schwab or prospects with at least $25,000 in assets available to bring to Schwab. Individualized recommendations are available only to Schwab clients and are limited to assets held outside of Schwab, as part of a Personal Portfolio Review are examples of the kinds of recommendations available on assets held at Schwab; these examples do not constitute recommendations, solicitations or investment advice. There are eligibility requirements to work with a dedicated Financial Consultant.

(0416-EYAZ)
One Retirement, Two Portfolios

You and your spouse might each be saving for retirement, but are your portfolios working toward the same goal?
As any happily married couple will attest, harmony is important in matters of love and money—and the same holds true for retirement planning. These days, it’s likely that you and your spouse both have careers, which means you’re managing two individual retirement portfolios. But separate investing strategies can make it tough to achieve the ultimate goal of a shared retirement. So how do you manage your combined investments so that your long-term plan unfolds as seamlessly as possible?

While the investing particulars of every marriage may differ, a few principles apply to all. The following points will help you and your spouse better coordinate your goals—and your asset allocations.

**Start the conversation and align retirement goals**

Are you talking to your spouse about retirement? You may be—and you may think you agree on the big picture. But the devil lies in the details, as they say. For example, a couple might profess a desire to travel in retirement. But when pressed for details, one spouse might envision buying an RV and driving cross-country, while the other spouse might be more interested in staying in resorts.

To avoid these issues, start talking early, and discuss your long-term desires in detail so that your retirement visions can evolve together.

**Manage your asset allocation together**

As you shape the plan for where you’re headed, the next step is aligning your investing strategies so that you get there.

First, it’s likely that you and your spouse have different risk tolerances, which have influenced your investment ideas and asset allocation thus far. Now it’s time to focus on asset location—meaning, which investments belong in which account.

For example, you could place tax-efficient assets (such as municipal bonds) in taxable accounts and leave less efficient assets, like real estate investment trusts (REITs), in tax-advantaged retirement accounts in order to maximize the after-tax benefits. Or, if one partner has relatively limited investing options through a 401(k) while the other has more varied choices, the partner with greater flexibility might take on a greater proportion of harder-to-access asset classes.

Let’s look at a hypothetical example of how this might work. Consider John, 65, and Elena, 60. John is ready to retire within the year; Elena would like to work for five more years. The combined value of their 401(k)s and IRAs is $1.4 million. They’d like to stay in their Chicago home, which has no mortgage, and take at least two
Thinking about survivorship

Although wives are statistically more likely than husbands to outlive their spouse, it’s a good idea for men and women alike to think about survivorship.

Consider the following tips as you work through your retirement plan.

Plan for higher medical costs: A recent study found that elderly women incur higher out-of-pocket medical expenses than men and that becoming a widow could increase those expenses by as much as 24%.

Purchasing additional long-term care insurance now could help cover increases in medical expenses down the road.

Check your life insurance coverage: If one spouse dies, will the other be able to cover all expenses? Business owners, parents with disabled or minor children, and people who will lose a substantial portion of the family income should make sure they’re properly insured, even in retirement.

Know your Social Security options: Figuring out the best time to file for Social Security benefits is always tricky, and it’s no easier when trying to factor in survivor benefits. However, if the higher-earning spouse delays benefits beyond full retirement age, the surviving spouse will be entitled to the increased benefits that result from the delay.

Even if you and your spouse are about the same age and are in good health, thinking about these scenarios now can help you create a more complete and comfortable plan that will support you both throughout retirement.

trips a year (to vacation and visit family).

John’s portfolio has become increasingly conservative over time. He now has 90% of his allocation in bonds and bond funds and 10% in equities, because he wants a more stable portfolio as he looks toward imminent retirement.

But Elena has a similar allocation in her portfolio, and that pronounced conservative allocation could keep them from reaching their goals, observes Anthony Davidow, Asset Allocation Strategist at the Schwab Center for Financial Research. “With fixed income yields at generationally low levels, this couple will need to get more income from their investments in order to enjoy the lifestyle they envision,” he says.

Based on the couple's stage in life and their desire to travel, Anthony suggests a more balanced portfolio. The couple's total equity allocation could comprise 28% of their combined portfolios—5% in income-producing global REITs and master limited partnerships (MLPs), and 23% in international and U.S. large-cap stocks that pay dividends.

The balance of the portfolios should be allocated to fixed income (62%) and cash (10%).

Of the bond holdings, Anthony says around 15% could be invested in international, high-yield and emerging market bonds.

Should Elena take all of the extra equity exposure in her portfolio, or should she and John split the difference? That’s up to the couple to decide, just as their final choice of assets will depend on their tolerance for risk. “The greater point is to view your individual retirement accounts as part of a larger whole, and manage them accordingly,” Anthony says.

Sample portfolio for a retired couple

The example is hypothetical and provided for illustrative purposes only. It is not intended to represent a specific investment product.

Source: Schwab Center for Financial Research.
Reexamine your holdings, investing expenses and diversification

In addition to reviewing your asset allocations together, it's important to look at the specific securities in your accounts, some of which you may have chosen years ago. Now is the time to make sure your assets are well-diversified and expenses are low.

Take the hypothetical case of Miguel and Amy. They’re both in their mid-40s with two teenagers; the couple has at least 20 years until retirement. Amy has a $230,000 401(k) worth $230,000, invested equally in a U.S. large-cap index fund and a U.S. bond index fund. Miguel was automatically enrolled in his company’s target-date fund some years ago. And while he has saved $225,000, the fund has an expense ratio of 1%. Both of them have some flexibility in terms of changing their allocations.

Given their ages—and the fact that they have two college-bound kids—Amy and Miguel could be open to taking on more risk. Anthony feels they can afford to do so, but they should also focus on diversification. Depending on the investments available to them, Anthony recommends dividing the majority of the portfolio between equities and fixed income. They could divide their equity holdings between U.S., international and emerging market stocks—both small and large. And they should also consider commodities and global REITs for some protection against inflation.

Additionally, Miguel might want to consider working with a financial professional to develop his own asset allocation—a complicated proposition, given that the goal is to replace his target-date fund and cut his expenses. But cutting expenses can help improve the couple’s overall returns during the next two decades.

Whatever your retirement portfolios look like now, the underlying idea here is to start with your joint vision, and extend that to your portfolios. It is important to periodically revisit your asset allocation and risk tolerance, and determine whether adjustments need to be made along the way. By viewing your assets as a whole, you can coordinate your investment strategy so that it serves your ultimate goal—a happy and financially healthy retirement. ■

Sample portfolio for a couple with teenage children

The example is hypothetical and provided for illustrative purposes only. It is not intended to represent a specific investment product.

Source: Schwab Center for Financial Research.

NEXT STEPS

Need help structuring your portfolio? Schwab’s portfolio management services offer ongoing investment advice and a wide range of investing strategies. Call 888-484-5340 or visit schwab.com/OIPortfolioManagement to learn more.


See page 42 for important information.

Examples provided are for illustrative purposes only and not intended to be reflective of results you can expect to achieve.

Past performance is no guarantee of future results.

Diversification and asset allocation strategies do not ensure a profit and cannot protect against losses in a declining market. (0416-EV9U)
Concerned About Costs? See How Schwab’s ETFs Stack Up

The less you spend, the more of your returns you get to keep.

At Schwab, we know costs matter. The less you spend on fund expenses, trading commissions and capital gains taxes, the more of your returns you get to keep. Schwab Market-Cap Index Exchange-Traded Funds (ETFs) strive to keep their costs low. Here’s how:

- **The lowest operating expenses**: Schwab Market-Cap Index ETFs have the lowest operating expense ratios in each of their respective Lipper categories—even lower than comparable Vanguard ETFs. Why does this matter? Because the expense ratio represents recurring fees that you’ll pay for as long as you own the ETF, and those fees can really add up over time.

- **Commission-free online trades**: Most brokers charge online trading commissions—generally between $4 and $12—each time you buy or sell an ETF. At Schwab, you pay $0 online trade commissions for Schwab ETF trades made within your account.³

- **Potential tax efficiency**: Since the launch of the first Schwab ETFs™ in November 2009, no Schwab ETF has distributed any capital gains,³ reducing potential tax liabilities for investors who own a Schwab ETF in a taxable account.

Why have Schwab’s ETFs been tax efficient? First, they seek to track market indexes. “Index” funds don’t buy and sell securities as frequently as funds that are actively managed, reducing the likelihood of capital gains. Second, the unique structure of ETFs generally allows the fund manager to move securities in and out of the fund in a manner that minimizes taxes. (For more information on ETFs and tax efficiency, see page 18.)

We’re on a mission to offer products with long-term performance potential at an attractive value. With low operating expenses, zero trading commissions and potential tax efficiency, Schwab Market-Cap Index ETFs can provide a cost-efficient way to create a diversified portfolio.

LET’S TALK
To learn more about Schwab Market-Cap Index ETFs, call us at 888-484-5340.
**Expenses matter. Guess who's lower, Vanguard or Schwab?**

Schwab Market-Cap Index ETFs have the lowest operating expenses in their respective Lipper categories\(^4\) and $0 commission ETFs.

<table>
<thead>
<tr>
<th>Domestic Equity ETFs</th>
<th>Schwb</th>
<th>Vanguard</th>
<th>iShares</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multi-cap core</strong></td>
<td>SCHB</td>
<td>VTI</td>
<td>EUSA</td>
</tr>
<tr>
<td><strong>Large-cap core</strong></td>
<td>SCHX</td>
<td>VV</td>
<td>ITOT</td>
</tr>
<tr>
<td><strong>Large-cap growth</strong></td>
<td>SCHG</td>
<td>VUG</td>
<td>QUAL</td>
</tr>
<tr>
<td><strong>Large-cap value</strong></td>
<td>SCHV</td>
<td>VTV</td>
<td>VLUE</td>
</tr>
<tr>
<td><strong>Equity income</strong></td>
<td>SCHD</td>
<td>VYM</td>
<td>HDV</td>
</tr>
<tr>
<td><strong>Mid-cap core</strong></td>
<td>SCHM</td>
<td>VO</td>
<td>IJH</td>
</tr>
<tr>
<td><strong>Small-cap core</strong></td>
<td>SCHA</td>
<td>VB</td>
<td>IJR</td>
</tr>
<tr>
<td><strong>Real estate</strong></td>
<td>SCHH</td>
<td>VNQ</td>
<td>ICF</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International Equity ETFs</th>
<th>Schwb</th>
<th>Vanguard</th>
<th>iShares</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International multi-cap Core</strong></td>
<td>SCHF</td>
<td>VEA</td>
<td>IEFA</td>
</tr>
<tr>
<td><strong>Intl. small/mid-cap growth</strong></td>
<td>SCHC</td>
<td>VSS</td>
<td>SCZ</td>
</tr>
<tr>
<td><strong>Emerging markets</strong></td>
<td>SCHI</td>
<td>WO</td>
<td>IEMG</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bond ETFs</th>
<th>Schwb</th>
<th>Vanguard</th>
<th>iShares</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core bond</strong></td>
<td>SCHZ</td>
<td>BND</td>
<td>AGG</td>
</tr>
<tr>
<td><strong>Inflation-protected bond</strong></td>
<td>SCHP</td>
<td>VTIP</td>
<td>STIP</td>
</tr>
<tr>
<td><strong>Short-term U.S. treasury</strong></td>
<td>SCHO</td>
<td>N/A</td>
<td>SHY</td>
</tr>
<tr>
<td><strong>General U.S. treasury</strong></td>
<td>SCHR</td>
<td>EDV</td>
<td>IEI</td>
</tr>
</tbody>
</table>

See page 42 for important information.

Investors should consider carefully information contained in the prospectus, including investment objectives, risks, charges and expenses. You can request a prospectus by calling 800-435-4000. Please read the prospectus carefully before investing. Past performance does not guarantee future performance.

Investment returns will fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost. Unlike mutual funds, shares of ETFs are not individually redeemable directly with the ETF. ETF shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV).

Diversification does not eliminate the risk of investment losses.

Schwab ETFs are distributed by SEI Investments Distribution Co. (SIDCO). SIDCO is not affiliated with The Charles Schwab Corporation or any of its affiliates. (0316-E311)

---

\(^4\)This claim is based on prospectus expense ratio data comparisons between Schwab Market-Cap ETFs and non-Schwab Market-Cap ETFs in their respective Lipper categories. A Schwab Market-Cap ETF is determined to be the lowest in its Lipper Category if its expense ratio is equal to or lower than the lowest expense ratio of any non-Schwab Market-Cap ETF in that category. Securities in Market-Cap ETFs are selected and weighted based on the size of their market capitalization. Expense ratio data for both Schwab and non-Schwab Market-Cap ETFs was obtained from Strategic Insight Simfund as of 4/30/2016. Expense ratio data for certain non-Schwab Market-Cap ETFs (BND -4/26/2016 and VB, VUG, VV, VTV, VO – 4/27/2016) and SCHA (5/2/2016) was obtained from fund prospectuses as of the dates indicated. ETFs in the same Lipper category may track different indexes, have differences in holdings, and show different performance. Competitors may offer more than one ETF in a Lipper category. The non-Schwab ETFs shown represent the funds with the lowest expense ratio within their fund family in their respective Lipper category. Expense ratios are subject to change.

Restrictions Apply: Online trades of Schwab ETFs are commission-free at Charles Schwab & Co., Inc. (Member SIPC), while trades of third-party ETFs may be subject to commissions. Broker-Assisted and Automated Phone trades are subject to service charges. Waivers may apply. See the Charles Schwab Pricing Guide for details. All ETFs are subject to management fees and expenses. An exchange process fee applies to sell transactions. As of 4/30/2016. There is no guarantee that capital gains or dividend distributions will not be made in the future.

Copyright © 2016 Schwab Chartered. All rights reserved. Used with permission.
Chip-based Security Can Help Protect You From Data Breaches

Charles Schwab Cards from American Express.

Headlines about identity fraud can be frightening. Global losses linked to payment card fraud came to $16.31 billion in 2014—with the United States accounting for nearly half that amount—and are forecast to grow to $35.54 billion by 2020.¹

That’s why the Schwab Investor Card™ from American Express and the American Express Platinum Card® for Schwab come embedded with EMV chips. Every time you use an EMV card at a retail location, the chip creates a unique transaction code. This deters potential fraudsters from counterfeiting your card in the event of a data breach.

Merchants in the United States and more than 80 other countries across the world now accept payments through chip terminals, adding to your peace of mind when you’re traveling and shopping. Cards also come equipped with a magnetic stripe so you can still make purchases using traditional payment terminals.

In addition to the enhanced security provided by the EMV chip technology, depending on the card you choose, you can get cash back on eligible purchases² or Membership Rewards® points from American Express that can be redeemed for deposits by Schwab into your eligible brokerage account.³ The Charles Schwab Cards from American Express are available only to clients who maintain an eligible brokerage account.⁴

brokerage products: not FDIC insured • no bank guarantee • may lose value

The Cards under this program are issued by American Express Bank, FSB and not Charles Schwab & Co., Inc. (“Schwab”). Schwab is the broker dealer subsidiary of The Charles Schwab Corporation. Brokerage products, including the Schwab One® brokerage account, are offered by Schwab, Member SIPC.

¹The Nilson Report.

²Cash back is only available to the Basic Card Member on a Charles Schwab Investor Credit Card™ from American Express that maintains a Schwab One® Account or Schwab General Brokerage Account held in the name of the Basic Card Member or in the name of a revocable living trust where the Basic Card Member is the grantor and trustee. (an “eligible brokerage account”).

³An eligible brokerage account will be linked to your Charles Schwab Investor Credit Card™ from American Express at time of Card account approval. If you have multiple eligible Schwab brokerage accounts and would like to update your linked account, please contact Schwab at 866-385-1227.

The cash back you will receive is 1.5% of the dollar amount of eligible purchases during a billing period. Cash back is received only on eligible purchases and will be deposited to your linked eligible brokerage account. Eligible purchases means purchases for goods and services minus returns and other credits. Eligible purchases do NOT include fees or interest charges, balance transfers, cash advances, purchases of travelers’ checks, purchases or reloading of prepaid cards, or purchases of other cash equivalents.

You will not receive cash back for eligible purchases posted to your Card account during a billing period if the Minimum Payment Due shown on the statement for that billing period is not paid by the Closing Date of the next billing period.

Schwab will deposit associated funds into your eligible brokerage account approximately 6 to 8 weeks from the end of the billing period in which they are received.

Please consult with your tax advisor regarding the tax implications of any reward.

²This reward is only available to the Basic Card Member on a Platinum Card® from American Express Exclusively for Charles Schwab who has a Schwab One Account or Schwab General Brokerage Account held in the name of the Basic Card Member or in the name of a revocable living trust where the Basic Card Member is the grantor and trustee. (an “eligible brokerage account”).

Additional Card Members and otherwise authorized third parties, including authorized account managers, may not redeem Membership Rewards points for this reward.

A Basic Card Member may redeem a minimum of 1 thousand and a maximum of 4 million Membership Rewards® points every 7 calendar days for this reward. Redeemed points will be immediately deducted by American Express from your Membership Rewards® account. Schwab will deposit associated funds into your chosen eligible brokerage account within 4 to 6 business days, excluding bank holidays. Points are not refundable once redeemed.

This reward is subject to the Terms and Conditions of the Membership Rewards® program. Please consult with your tax advisor regarding the tax implications of any reward.

³The Platinum Card® from American Express Exclusively for Charles Schwab and the Charles Schwab Investor Credit Card™ from American Express are available to you only if you have an eligible Schwab brokerage account (an “eligible brokerage account”). An eligible brokerage account means a Schwab One Account or Schwab General Brokerage Account held in your name or in the name of a revocable living trust where you are the grantor and trustee. Eligibility is subject to change.

American Express may cancel your Card Account and participation in this program, if you do not maintain an eligible brokerage account. (0416-EHXX)
Welcome to the checking account that makes life easier.

Our investor-friendly checking account is linked to your Schwab brokerage account, so making online transfers is simple. Enjoy unlimited ATM fee rebates worldwide,¹ no monthly service fees,² and no foreign transaction fees³ with this checking account as well.

Open a Schwab Bank High Yield Investor Checking® account today. Go to schwab.com/checking or call us at 1-866-215-1863.

¹Unlimited ATM fee rebates apply to cash withdrawals using the Schwab Bank Visa® Platinum Debit Card wherever it is accepted. ATM fee rebates do not apply to any fees other than fees assessed for using an ATM to withdraw cash from your Schwab Bank account. Schwab Bank makes its best effort to identify those ATM fees eligible for rebate, based on information it receives from Visa and ATM operators. In the event that you have not received a rebate for a fee that you believe is eligible, please call a Schwab Bank Client Service Specialist for assistance at 1-888-403-9000. Schwab Bank reserves the right to modify or discontinue the ATM fee rebate at any time.

²While there are no fees to open or maintain a Schwab One® brokerage account, other account fees, fund expenses, and brokerage commissions may apply.

³If you use your debit card to withdraw foreign currency from an ATM or to pay for a purchase with foreign currency, we charge your account for the U.S. dollar equivalent of the transaction. Depending on the specific arrangements that are in place, the exchange rate and calculation of the U.S. dollar equivalent will be done by the bank at which you conduct the transaction, the network to which the ATM belongs, or Visa. The bank or network may also charge a fee.

The Schwab Bank High Yield Investor Checking account is available only as a linked account with a Schwab One brokerage account. The Schwab One brokerage account has no minimum balance requirements when opened with a linked High Yield Investor Checking account.

Charles Schwab & Co., Inc. (“Schwab”) and Charles Schwab Bank are separate but affiliated companies and wholly owned subsidiaries of The Charles Schwab Corporation (“Charles Schwab”). Brokerage products and services are offered by Charles Schwab & Co., Inc., member SIPC. Deposit and lending products and services are offered by Schwab Bank, member FDIC and an Equal Housing Lender.

Brokerage Products: Not FDIC-Insured • No Bank Guarantee • May Lose Value

©2016 Charles Schwab. All rights reserved. Member FDIC. CC0009486 (06/15-3058) ADP85228-01 (06/16)
Don’t go it alone. We can help you build mutual fund and ETF portfolios.

Use Schwab’s Portfolio Builder tools to build diversified portfolios that are right for you.

Mutual funds and ETFs can be an important part of your long-term financial plan. That’s why we strive to provide our clients with expert guidance and powerful tools at no additional fee.

With Schwab you receive:

- **Simplicity**—Our tools and resources are available 24/7 and are designed to help you understand mutual funds, ETFs and the purchase process.

- **Expert proprietary research**—Portfolios are prepared, updated and rigorously screened by Charles Schwab Investment Advisory, Inc., a Registered Investment Advisor and affiliate of Charles Schwab & Co., Inc.

- **Broad coverage**—Access a wide range of Morningstar categories for mutual funds and ETFs from leading providers.

- **Value**—Enjoy low-cost, transparent pricing that’s easy to understand.

- **Unique online tools**—Our comprehensive online tools guide you in choosing predefined portfolios that best match your risk tolerance.

Here’s how to get started:

1. Go to the Mutual Fund Portfolio Builder.
   schwab.com/MutualFundPortfolioBuilder

2. Go to the ETF Portfolio Builder.
   schwab.com/ETFPortfolioBuilderTool

**STEP 1: Select the account in which you would like to invest.**

The account must have cash available.

**STEP 2: Tell us your risk tolerance.**

Before investing in mutual funds or ETFs, you need to tell us your tolerance for risk. Choose your risk profile from the drop-down menu or use our risk questionnaire, which asks you to consider your financial goals, investment time horizon and level of comfort with risk in your portfolio. From there, we break risk tolerance into multiple categories so you can choose the one appropriate to your investing style.
**STEP 3: Tell us how much you’re investing.**

You’re free to invest as much as you’d like, but both mutual funds and ETFs have a $5,000 minimum to ensure proper diversification for risk management.

**STEP 4: Review your portfolio.**

Once you’ve selected your risk tolerance and your investing amount, the tool will generate a diversified portfolio along with in-depth details about the portfolio. The report will include:
- Fund names and symbols
- Fund category
- Current fund price (for ETFs)
- Number of shares to be purchased (for ETFs)
- Risk profile allocation
- Portfolio allocation percentage
- Prospectus PDF

Our portfolio suggestions are built with our Schwab Mutual Fund OneSource Select List® and ETF Select List®, both of which are prescreened by our experts. You always have the freedom to customize the portfolio allocations as you see fit.

**STEP 5: Complete your transaction.**

Before you can complete your transaction, you’ll have a few more decisions to make. For mutual funds, you’ll have to decide whether or not to reinvest your dividends and capital gains. For ETFs, you’ll need to select things like order type and trading time. Once that’s done, complete your transaction by selecting the Trade button.

Investors should carefully consider information contained in the prospectus, including investment objectives, risks, charges and expenses. You can request a prospectus by calling 800-435-4000. Please read the prospectus carefully before investing.

In using this tool, be aware that Schwab is not analyzing your investment portfolio or your individual circumstances, or considering or recommending what you should buy, hold or sell in your account. Before buying, you should consider whether any investment is suitable for your circumstances.

Investment value will fluctuate, and shares, when redeemed, may be worth more or less than their original cost. Unlike mutual funds, shares of ETFs are not individually redeemable directly with the ETF. Shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV).

Diversification strategies do not ensure a profit and do not protect against losses in declining markets.

Charles Schwab & Co., Inc. (member SIPC) receives remuneration from fund companies in Schwab’s Mutual Fund OneSource® service for recordkeeping and shareholder services and other administrative services. Schwab and its affiliates also receive fees from the Schwab Affiliate Funds for investment advisory, administrative and transfer agency services, as well as shareholder and other fund services. The aggregate fees Schwab or its affiliates receive from Schwab Affiliate Funds (see fund prospectus for more details) are generally greater than the remuneration Schwab receives from fund companies participating in the Mutual Fund OneSource service. Charles Schwab Investment Advisory, Inc., is an affiliate of Charles Schwab & Co., Inc.

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC.  CC0430228 (0316-DANE) ADP86294OW-02 (03/16)
The information provided here is for general informational purposes only and should not be considered an individualized recommendation or personalized investment advice. The investment strategies mentioned here may not be suitable for everyone. Each investor needs to review an investment strategy for his or her own particular situation before making any investment decision. All expressions of opinion are subject to change without notice in reaction to shifting market conditions.

Data contained herein from third-party providers is obtained from what are considered reliable sources. However, its accuracy, completeness or reliability cannot be guaranteed. Examples provided are for illustrative purposes only and not intended to be reflective of results you can expect to achieve. Indexes are unmanaged, do not incur management fees, costs and expenses, and cannot be invested in directly.

Performance may be affected by risks associated with non-diversification, including investments in specific countries or sectors. Additional risks may also include, but are not limited to, investments in foreign securities, especially emerging markets, real estate investment trusts (REITs), fixed income, small capitalization securities and commodities. Each individual investor should consider these risks carefully before investing in a particular security or strategy. (p. 5, 8, 14–17, 32–35)

International investments are subject to additional risks such as currency fluctuation, geopolitical risk and the potential for illiquid markets. Investing in emerging markets may accentuate these risks. (p. 12–13)

Schwab's short-term redemption fee of $49.95 will be charged on redemption of funds purchased through Schwab's Resource OneSource service (and certain other funds with no transaction fee) and held for 90 days or less. Schwab reserves the right to collect certain funds from this fee, including Schwab Funds, which may charge a separate redemption fee, and funds that accommodate short-term trading. For trade orders placed through a broker, a $25 service charge applies. Funds are also subject to management fees and expenses. (p. 8)

Trades in no-load mutual funds available through the Mutual Fund OneSource service (including Schwab Funds), as well as certain other funds, are available without transaction fees when placed through schwab.com or our automated phone channels. For each of these trade orders placed through a broker, a $25 service charge applies. Schwab reserves the right to charge the funds we make available without transaction fees and to reinstate fees on any funds. Funds are also subject to management fees and expenses. (p. 8)

Charles Schwab Investment Advisory, Inc., is an affiliate of Charles Schwab & Co., Inc. (p. 8, 18–19, 23–27, 44)

The Schwab Center for Research is a division of Charles Schwab & Co., Inc. (p. 12–13, 14–17, 20–22, 23–27, 32–35)

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors. (p. 5, 15–17)

Investment returns will fluctuate and are subject to market volatility, so that an investor's shares, when redeemed or sold, may be worth more or less than their original cost. Shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV). (p. 14–17)

Municipals and tax-exempt bonds are not necessarily a suitable investment for all persons. Information related to a security's tax-exempt status (federal and in-state) is obtained from third parties and Schwab does not guarantee its accuracy. Tax-exempt income may be subject to the Alternative Minimum Tax (AMT). Capital appreciation from bond funds and discounted bonds may not be subject to state or local taxes. Capital gains are not exempt from federal income tax. (p. 14–17)

Schwab's StreetSmart Edge is available for Schwab Trading Services clients. Access to Nasdaq TotalView® is provided for free to nonprofessional clients who have made 120 or more equity and/or options trades in the last 12 months or have made 30 or more equity and/or options trades in either the current or previous quarters, or maintain $1 million or more in household balances at Schwab. Schwab Trading Services clients who do not meet these requirements can subscribe to Nasdaq TotalView for a quarterly fee. Professional clients may be required to meet additional criteria before obtaining a subscription to Nasdaq TotalView. This offer may be subject to additional restrictions or fees, and may be changed at any time. The speed and performance of streaming data may vary depending on your modem speed and ISP connection. Access to electronic services may be limited or unavailable during periods of peak demand, market volatility, systems upgrades or maintenance, or for other reasons. (p. 20–22)

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 that is derived from several research factors. The assignment of a final Schwab Equity Rating depends on how well a given stock scores on each of the factors and then how that stock stacks up against all other rated stocks. (p. 20–22)

Schwab Equity Ratings and the general buy/hold/sell 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. 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. (p. 20–22)

The Barclays U.S. Aggregate Bond Index is a market-value-weighted index of taxable investment-grade fixed-rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities, with maturities of one year or more. (p. 14–17)

The S&P 500® Index is a market-capitalization-weighted index comprising 500 widely traded stocks chosen for market size, liquidity and industry group representation. (p. 23–27)

The Russell 1000® Index measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1,000 of the largest securities based on a combination of their market capital and current index membership. (p. 23–27)

The Russell 1000® Growth Index contains those Russell 1000 securities with a greater-than-average growth orientation. (p. 23–27)

Diversification strategies do not ensure a profit and do not protect against losses in declining markets. (p. 23–27)

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC. (0516-FZSR)

CORRECTION

On page 34 in our Summer 2016 article "A Balanced Portfolio in Retirement," we stated that our moderately conservative portfolio has a 30% U.S. large-cap stock allocation. That is incorrect. Our moderately conservative portfolio has a 25% U.S. large-cap stock and a 5% U.S. small-cap stock allocation. We regret the error.
Retirement is more relaxing when you’re less worried about income.

Schwab Fixed Income Specialists can help you generate income throughout retirement.

Knowing you have steady post-retirement income can make life a lot more enjoyable. Fortunately, with an average of 21 years in the business, Schwab Fixed Income Specialists can help. Guided by their extensive insights and experience, our specialists will evaluate your individual situation and goals to help create the right fixed income portfolio for you.

Get a complimentary consultation. Call 1-866-893-6699.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed income investments are subject to various other risks, including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications, and other factors.

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC.
COD4/26/13 (0216-0SH2) AOP90725-00 (03/16)
"Optimism means you have to look beyond the turbulent present and focus on the future. After all, growth is rarely a short-term affair."

Stay the Course
Stocks can provide growth—but only if you’re invested.

If there’s one thing that makes investors nervous, it’s market volatility. Wild swings in stock prices can tug at our emotions and tempt us to make hasty decisions that run counter to our goals. And when things get really bumpy, as they did earlier this year, some investors might be tempted to pull out of the market altogether.

But keeping even the worst bouts of turbulence in perspective can be good for both your nerves and your portfolio. Yes, stocks tend to be riskier than other investments, but they also have the potential for higher reward. In fact, research shows that stocks tend to outperform other asset classes over the long term, and they far outpace inflation, as well. From 1970 through 2014, for example, large-cap stocks generated annual compounded returns of 10.5%, while bonds generated returns of 7.9% and inflation averaged 4.2%. Importantly, that time frame included two extremely challenging periods for stocks: the tech bubble and subsequent bear market of the early 2000s and the Great Recession of 2008–2009.

Of course, you can’t take advantage of such gains if you’re not invested—and that means staying invested during periods of increased volatility, however counterintuitive that may sound. In fact, we’ve run comparisons between hypothetical portfolios and found that people who stuck to a regular investment plan even when markets were going haywire enjoyed greater returns than those who pulled out when things got rough.

Buying stocks is the best way I know to achieve growth. I also believe that investing is an act of optimism—optimism and belief in the growth of our country, our economy and the companies that drive it. Sometimes maintaining that optimism means you have to look beyond the turbulent present and focus on the future. After all, growth is rarely a short-term affair.

If you find yourself concerned at the first sign of market volatility or tempted to pull out of the market altogether, you may be taking on too much risk in your portfolio, and it’s probably a good idea to revisit your asset allocation. Check to make sure that your overall allocation still reflects both your willingness and capacity to take on risk, and that you’re not overexposed to any one asset class.

And take heart: No bear market yet has been severe enough to knock stocks off their long-term rise. As investors, we know the markets will test us sometimes. How we respond could be the difference between a success or a stumble.

Charles R. Schwab,
Founder & Chairman

---

2The example measured how three hypothetical portfolios grew as three individuals invested 10% of their annual salaries in increasingly conservative asset allocations over time. Each investor began with a salary of $18,580 in 1973 that grew to $100,000 in 2008 based on a 3% annual increase and a 10% promotion every five years. The hypothetical investors began at age 26 with the Schwab Aggressive Model Plan (50% large-cap stocks, 25% international stocks, 20% small-cap stocks, 5% cash), shifted to the Moderately Aggressive Model at age 39 (45% large-cap stocks, 20% international stocks, 15% small-cap stocks, 15% bonds, 5% cash) and moved to the Moderate Model at age 52 (35% large-cap stocks, 15% international stocks, 10% small-cap stocks, 35% bonds, 5% cash). The asset allocation plan performance was the weighted averages of the performances of the indexes used to represent each asset class in the plans, and the plans were rebalanced annually. Fees and expenses would lower returns. Past performance is no guarantee of future results. U.S. large-cap stocks are represented by the S&P 500® Index. U.S. small-cap stocks are represented by the Russell 2000® Index, and the CRSP 6-8 was used prior to 1979. International stocks are represented by the MSCI EAFE® net of taxes. Bonds are represented by the Barclays U.S. Aggregate Index, and the Ibbotson Intermediate-Term Government Bond Index was used prior to 1979. Cash equivalents are represented by the Citigroup 3-Month U.S. Treasury Bill Index, and the Ibbotson U.S. 30-day Treasury Bill Index was used prior to 1978.

See page 42 for important information.

(0316-E3WZ)
Add a layer of diversification to your portfolio.

Ready to diversify on a different level? Start with Schwab Fundamental Index® ETFs, which hold stocks that are selected and weighted based on three fundamental measures: adjusted sales, retained operating cash flow, and dividends plus buybacks. This index strategy can complement traditional market-cap and actively managed strategies, plus you can trade these ETFs commission-free online in your Schwab account. Visit schwab.com/schwabETFs or call 1-800-435-4000.

Explore Schwab Fundamental Index ETFs.

<table>
<thead>
<tr>
<th>Domestic Equities</th>
<th>International Equities</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNDB</td>
<td>FNDF</td>
</tr>
<tr>
<td>U.S. Broad Market</td>
<td>International Large Company</td>
</tr>
<tr>
<td>FNDX</td>
<td>FNDC</td>
</tr>
<tr>
<td>U.S. Large Company</td>
<td>International Small Company</td>
</tr>
<tr>
<td>FNDA</td>
<td>FNDE</td>
</tr>
<tr>
<td>U.S. Small Company</td>
<td>Emerging Markets Large Company</td>
</tr>
</tbody>
</table>

Brokerage Products: Not FDIC-Insured • No Bank Guarantee • May Lose Value

*Schwab is a registered trademark of Charles Schwab & Co., Inc. Fundamental Index is a registered trademark of Research Affiliates, LLC.

1Restrictions apply: Online trades of Schwab ETFs™ are commission-free at Charles Schwab & Co., Inc. (Member SIPC), while trades of certain third-party ETFs are subject to commissions. Broker-assisted and automated phone trades are subject to service charges. Waivers may apply. See the Charles Schwab Pricing Guide for details. All ETFs are subject to management fees and expenses. An exchange processing fee applies to sell transactions.

Investors should carefully consider information contained in the prospectus, including investment objectives, risks, charges, and expenses. You can request a prospectus by visiting CSIFunds.com. Please read the prospectus carefully before investing.

Investment returns will fluctuate and are subject to market volatility such that an investor's shares, when redeemed or sold, may be worth more or less than their original cost. Unlike mutual funds, shares of ETFs are not individually redeemable directly with the ETF. Shares are bought and sold at market price, which may be higher or lower than the net asset value (NAV).

Diversification does not eliminate the risk of investment losses.

Schwab ETFs are distributed by SEI Investments Distribution Co. (SIDCO). SIDCO is not affiliated with The Charles Schwab Corporation or any of its affiliates.

©2016 Charles Schwab Investment Management, Inc. All rights reserved. CCC0610519 (0516-1373) ADP03665-01 (08/16)
Friendship. There is no better investment.

Refer your friends and family to Schwab, and they can get $100.

To learn more, invite them to:
- Visit schwab.com/referred,
- Call 1-800-398-8640, or
- Drop by any Schwab branch.

Have them use offer code: refer6

New clients who are referred, open an account, and enroll in the offer can earn $100. See schwab.com/referred for details. Schwab may change the terms or terminate the offer at any time.

Charles Schwab received the highest numerical score in the J.D. Power 2016 Full-Service Investor Satisfaction Study, based on 8,006 responses from 20 firms measuring opinions of investors who used full-service investment institutions and were surveyed in January 2016. Your experiences may vary. Visit jdpower.com.

©2016 Charles Schwab & Co., Inc. All rights reserved. Member SIPC.