Executive summary. This paper describes several basic strategies for generating and managing income in retirement. We review some common approaches, including income investing, total-return-based spending, and the use of insurance-based products such as income annuities.
Introduction

The oldest members of the baby boom generation, the 78.2 million Americans born from 1946 through 1964, began reaching age 60 in 2006. This generation’s sheer size and inexorable entry into retirement have focused considerable attention on issues surrounding retirement.

Figure 1 shows how the number of Americans aged 65 and over has grown in the past half-century, and how rapidly it is expected to increase in the coming decades. Projections indicate that by 2030, this age group will represent 20% of the U.S. population, up from 12% in 2000. Not only is there a growing number of older Americans, but they are living longer and healthier lives than previous generations. For a 65-year-old married couple today, for example, there is a 72% chance that at least one spouse will live to age 85, a 45% chance that one will live to age 90, and an 18% chance that one will reach age 95.

Despite the recent spate of press coverage about the challenges tomorrow’s retirees will face, the financial aspects of retirement are neither new nor unfamiliar. Millions of retirees are currently managing a variety of income sources, including Social Security, pension payments, and investment income. So how are they doing it?

Notes on risk: Mutual funds, like all investments, are subject to risk. Investments in bond funds are subject to interest rate, credit, and inflation risk. Diversification does not ensure a profit or protect against a loss in a declining market. Past performance is not a guarantee of future results.

An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although a money market fund seeks to preserve the value of your investment at $1 per share, it is possible to lose money by investing in such a fund.

Managed payout funds are subject to special risks and may not be appropriate for all investors. Among their risks are: The dollar amounts of cash distributions may fluctuate substantially over time, and the distributions may be treated in part as a return of capital. Like other mutual funds, managed payout funds are subject to the risks associated with the specific markets in which they invest; this means that a managed payout fund can suffer substantial investment losses at the same time that it experiences asset reductions through its distributions to shareholders. All investors should carefully review the potential tax consequences of holding a managed payout fund, particularly if the investor is considering holding the shares in a tax-advantaged account.

Because high-yield bonds are considered speculative, investors should be prepared to assume a substantially greater level of credit risk than with other types of bonds. Investments in all-in-one funds are subject to the risks of their underlying funds. Consider consulting a tax advisor regarding your individual situation.

1 Source: U.S. Census Bureau.
2 Source: U.S. Census Bureau.
3 Source: Society of Actuaries Retired Participants 2000 Mortality Table.
First, for a number of households, Social Security can provide a high level of replacement income in retirement. For those who have invested diligently throughout their working years, portfolio income provides additional support. And roughly one-third of Americans age 65 or older are receiving lifetime pensions from their employers.\(^4\)

What is different for the next crop of retirees, however, is that traditional pensions are rapidly disappearing from the landscape. In their place, many employers are sponsoring plans that lead to a lump-sum benefit at retirement. The challenge for new retirees, then, increasingly becomes how to translate this lump sum into a source of income that will last through the retirement years.

In this paper, we describe several basic strategies for generating and managing income in retirement.\(^5\)

What follows is an overview; we do not attempt to examine all individual situations, or all considerations regarding the dynamic U.S. tax code. The objective is not to recommend an optimal strategy for obtaining retirement income. Our goal is more practical: to explain some of the basic mechanisms (and the basic ideas behind more complicated mechanisms) that retirees might employ in seeking a reliable income.

A starting point for all retirees

The first thing to do:

Take an inventory of income

When preparing for retirement, an investor should first take an inventory of all income sources. Some of the most common are Social Security, pensions, part-time employment, and rental income or trust income. The inventory should also include investment cash flows, such as any required minimum distributions from tax-deferred accounts (beginning at age 70½) and dividends, interest, and capital gains distributions from taxable accounts. Since cash flows from the investment portfolio will be subject to taxation, this money should be the first resource tapped to meet spending needs. That allows the assets that remain invested to keep earning.

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\(^{4}\) According to the EBRI Data Book on Employee Benefits (September 2007 update) from the Employee Benefit Research Institute. This proportion is likely to decline as more employers migrate away from defined benefit plans and toward defined contribution plans.

\(^{5}\) For a more detailed review of new and innovative retirement income products and strategies, see Mottola and Utkus, 2008.
Then set up a ‘spending account’ to manage income flows
The retiree’s income flows can be directed to a “spending account,” which is typically a money market fund or bank checking account. The spending account is a convenient cash-management vehicle, serving as a repository to which cash flows are directed and from which expenses are paid.

How much should be held in the account? That is an individual decision, but a good rule of thumb is to have enough funds on hand to cover at least six to 12 months of anticipated spending needs. Investors who have specific short-term goals—for example, a home improvement project or a vacation—might opt to keep a higher balance in the spending account.

If the cash flows into the spending account suffice for the retiree’s needs, then there is no need for withdrawals from the investment portfolio. Any significant surplus in the spending account may be reinvested in the portfolio to help with periodic rebalancing when the target asset allocation needs to be restored.

But what if the cash flows are not sufficient? In this case, the investor will have to find ways to increase cash flow from the portfolio. Today, a number of options exist, depending on the investor’s goals and desired level of involvement in managing the distribution program. Figure 2, on page 3, highlights several of the most common strategies, which we will discuss in more detail in the sections that follow. It’s important to note that these strategies are not “all or nothing”—investors can choose more than one and tailor them to a particular situation.

The most common portfolio strategies for generating retirement income

Income investing
One of the most common portfolio income approaches traditionally used by investors is to focus on income-generating investments. This “income investing” approach can be very simple to manage: Basically, the investor spends only the income, such as interest and dividends, that the portfolio generates.

Retirees who adopt this “don’t touch the principal” strategy often believe that it is the only way to protect themselves against the risk of running out of money.

In some situations, this approach has proven very effective. However, only investors who have very large portfolio balances or low spending needs will be able to do this while meeting their spending goals and keeping their portfolios diversified. Those who are not comfortable with the notion of spending from their portfolios, or who want to increase current portfolio income, may forgo portfolio diversification and turn to one of the following strategies: increasing the portfolio’s allocation to bonds, tilting the bond allocation toward higher-yielding bonds, or tilting the equity allocation toward higher-dividend-paying stocks. While individuals who follow one of these approaches usually have a goal of preserving principal, the value of invested principal (and income) will fluctuate with market prices, and the income obtained may not keep up with inflation over the long term.6

Overall, an income-oriented investing strategy has two fundamental drawbacks:

• **Concentration risk.** A portfolio exclusively focused on income will be overweighted in fixed income investments or equity investments that generate high dividend payouts. This focus can jeopardize the portfolio’s ability to maintain inflation-adjusted spending over the long term. Such a portfolio will lack sufficiently broad diversification and growth potential to generate income that will keep up with inflation over time. As a result, the investor is likely to fall short of spending goals later in retirement.

• **Tax cost.** In taxable accounts, distributions from income-generating investments, such as taxable bond funds, are subject to income taxation. Income is highly taxed—current marginal income tax rates go up to 35%—so the impact on a retiree’s net income can be significant.

The total-return spending approach
The preferred alternative to income-only investing generally is a total-return spending approach, in which the investor spends the income and taps the principal when necessary. The income is used first; then, if it...

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6 For a full discussion of income-based versus total-return-based spending strategies, see Jaconetti, 2007a.
Throughout this paper, when we discuss single-fund or all-in-one fund options, we are including balanced funds that hold a mix of asset classes (for example, stocks, bonds, and cash) and funds-of-funds that are made up of mutual funds investing across asset classes.

The primary advantage of a total-return approach is that it offers the potential to increase the longevity of the portfolio, reduce the number of times that it needs to be rebalanced, and increase overall tax-efficiency. Investors can employ this approach through an “all-in-one” fund or by creating a customized spending plan.

**All-in-one funds**
A wide range of all-in-one funds exists in the marketplace today. These funds offer investors a diversified single-portfolio approach—providing professional investment management while transferring the complexities of portfolio construction to the fund’s advisor. Benefits for the investor include asset allocation and automatic rebalancing, diversification, convenience, and simplicity. An all-in-one fund provides a bundled approach by combining asset classes, sub-asset classes, and management style into one fund.

For some investors, an all-in-one fund can provide the further benefit of removing some of the emotional biases that may influence portfolio management decisions. For example, a balanced fund may help remove the focus on short-term or fund-level performance for those investors who find they have a tendency to avoid rebalancing, chase performance, or attempt to time the market, all of which are ineffective long-term investing strategies.

An all-in-one fund can offer great convenience to retirees who are spending from their portfolios. For this purpose, funds can generally be differentiated by how their payment mechanics work. An investor can select the type that is best aligned with his or her goals and create a withdrawal program, or select a fund that has a managed distribution policy.

A new category of funds, generally called managed payout funds, incorporates a formulaic spending policy into the portfolio management. These funds, which are relatively new to the mass market, further simplify the decision-making for investors. It’s largely a matter of selecting a fund with the desired payout pattern. With a managed payout fund, the investor retains access to the account balance, but payments and account balance will fluctuate, and neither the balance nor the payments are guaranteed.

Managed payout funds exist in several forms, but generally fall into two basic categories:

- **Endowment-like funds.** These funds are designed to generate regular payouts while striving to preserve (or in some cases grow) the principal. As with an endowment, the fund’s withdrawal strategy is based on a predefined rule, such as a percentage of the rolling three-year average of the fund’s net assets.

- **Time-horizon funds.** With this type of fund, payments are managed so as to exhaust the investor’s account over a specified period, for example 10, 20, or 30 years. The goal is to provide regular payouts from earnings and principal consistently over a given time period. The intent is that, at the end of the time period, the fund balance will be exhausted with the last payout.

Managed payout funds may be attractive to individuals who are looking for a way to obtain a professionally managed stream of income while retaining access to the account balance. Investors need to recognize, however, that the payments from these funds are not guaranteed and that the payments and account balance will fluctuate. Some distributions may be treated in part as a return of capital. There is also the risk that the fund management may not maintain its payout policy over time, or—in the case of a time-horizon fund—that a retiree could live past the selected “target date.” As with any investment-based strategy, individuals must be comfortable with the potential for a significant drop in monthly payments if there is a steep or prolonged market decline.

*Continued on page 8.*

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7 Throughout this paper, when we discuss single-fund or all-in-one fund options, we are including balanced funds that hold a mix of asset classes (for example, stocks, bonds, and cash) and funds-of-funds that are made up of mutual funds investing across asset classes.
Case study: An income approach using two different balanced funds

We looked at the results for two Vanguard balanced funds over a 30-year timespan. The funds differ in their asset allocation targets: Vanguard Wellesley® Income Fund seeks to maintain an allocation of 60%–65% bonds and 35%–40% stocks, while Vanguard Wellington™ Fund reverses those proportions. As its name implies, the Wellesley fund is more income-oriented, whereas Wellington is more focused on long-term growth of capital.

Because the date of an investor’s retirement can have significant impact on long-term results, we also examined each fund’s 30-year outcomes using two different starting dates. One sequence begins at year-end 1970, the outset of a decade that included a bear market and a recession, and the other at year-end 1979. The latter date was the latest that offered a full 30 years’ worth of data.

The basic assumptions

In each of these hypothetical examples, we assume that the initial investment was $100,000 and that the investor took income distributions in cash while reinvesting all capital gain distributions in the fund. We have adjusted the results for inflation, but not for any tax impact (so all results are pre-tax).

Looking first at the Wellesley Income Fund:

- Investor A, who retired at the end of 1970, would have received $6,892 of income in 1971. In inflation-adjusted terms, the income slowly and steadily declined over time.
- Investor B who retired at the end of 1979, would have received $9,228 in the first year of retirement—roughly $2,300 (34%) more than his earlier counterpart started with. Investor B then continued to earn higher income levels than investor A. Note, however, that the income pattern showed similar declines over time.
- In both scenarios, the investors’ balance fell for a time below the initial $100,000 investment, but for investor A the drop was more significant and prolonged because of the recession years of the mid-1970s. At the end of 30 years, investor A’s balance was $58,730 and investor B’s balance was $105,600—a difference of almost 80%.

Alternatively, we repeated the case study for the Wellington Fund.

- For investor A, income for 1971 started out at $3,771 and didn’t fluctuate widely.
- For investor B, who retired in 1979, the first year’s income was $7,301 (nearly twice as much as Investor A received).
- Ending balances after 30 years, again, showed wide differences. Investor A had $116,740 while investor B had $228,740—almost double for the later retiree.

The potential effects of allocations

The differences in these results are not surprising. The Wellesley fund, which holds more bonds, generated higher initial income levels than the Wellington fund, and it did so with less short-term volatility. On the other hand, the Wellesley fund did not experience long-term, inflation-adjusted capital appreciation.

A portfolio invested exclusively in bonds likely would provide even higher current income than the Wellesley fund did, but that income probably would decline more over time on an inflation-adjusted basis, as would the portfolio balance.

For many investors seeking both income and the possibility of portfolio growth, a balanced fund can be a viable investment. As we note elsewhere in this paper, before choosing any such fund, it’s essential for an investor to decide on a target asset allocation and to carefully consider the spending options discussed here and elsewhere (see the References).

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8 We used inflation-adjusted December 1970 dollars and December 1979 dollars for the respective examples.
The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors’ shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at www.vanguard.com/performance.

### Average annual total returns as of June 30, 2010

<table>
<thead>
<tr>
<th>Fund</th>
<th>One year</th>
<th>Three years</th>
<th>Five years</th>
<th>Ten years</th>
<th>Expense ratio*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellesley Income Fund</td>
<td>15.54%</td>
<td>2.98%</td>
<td>4.74%</td>
<td>6.90%</td>
<td>0.31%</td>
</tr>
<tr>
<td>Wellington Fund</td>
<td>12.41%</td>
<td>–2.14%</td>
<td>3.84%</td>
<td>5.92%</td>
<td>0.34%</td>
</tr>
</tbody>
</table>

*These expense ratios are taken from the prospectuses dated January 27, 2010, for the Wellesley Income Fund and March 26, 2010, for the Wellington Fund.
While all-in-one funds offer many benefits, their convenience comes with drawbacks. With an all-in-one fund, investors generally must sacrifice the benefit of tax-efficient portfolio construction, and for retirees, a tax-efficient withdrawal strategy. Another consideration: If an individual has holdings with large accumulated gains that are subject to capital gains tax if sold, it may not be practical to liquidate these holdings in order to purchase an all-in-one fund. In other situations, investors may simply have a strong affinity to their individual holdings and wish to keep them.

**A customized portfolio spending approach**

For investors who own both taxable and tax-advantaged accounts, forgoing the single-fund option and instead investing in individual funds can provide opportunities for more tax-efficient investing. If the priority is to maximize after-tax returns, the investor would likely be better off putting tax-efficient investments in taxable accounts and tax-inefficient assets in tax-advantaged accounts, spending from the taxable assets first (Jaconetti and Bruno, 2008).

In these situations, the investor can create a customized spending program, which typically includes income distributions and withdrawals from the portfolio. Doing so, however, requires managing the portfolio income flows and deciding which assets to sell in order to meet spending needs while keeping the total portfolio balanced appropriately over time.

For motivated investors, this can be a manageable process. It offers the greatest opportunity for tax-efficiency and flexibility, particularly when the total portfolio consists of different account types. It also provides the most control over portfolio holdings and the distribution schedule. However, the complexity of management increases with the complexity of portfolio holdings and account types and can ultimately become challenging. Also, with this approach the investor bears all the risks associated with managing the portfolio’s asset allocation, rebalancing, cash-flow sufficiency, and withdrawals.

While everyone’s situation is different, these are some general guidelines for investors who are creating a customized plan:

- **Asset allocation.** The investor’s first task is to establish a target asset allocation—the percentages of the portfolio to be invested in different asset classes, such as stocks, bonds, and cash reserves. The asset allocation should be based on the investor’s objectives, time horizon, and risk tolerance. Although the desired level of income is relevant to this decision, it should not be the primary driver. In other words, an individual generally should not base the portfolio asset allocation strictly on the desired current income.

- **Asset location.** After deciding on the asset allocation, an investor who has taxable assets generally should seek to maximize the portfolio’s after-tax returns. Asset location—the question of which investments should be held in taxable accounts and which in tax-advantaged accounts—is critical to this outcome. The objective of asset location is to hold tax-efficient stock investments (such as broad market index funds/exchange-traded funds and tax-managed funds) in taxable accounts and tax-inefficient investments (such as taxable bond funds and actively managed stock funds) in tax-advantaged accounts. Asset location becomes more meaningful when tax-advantaged and taxable accounts are about equal in a portfolio. It is also an important consideration for investors with long time horizons, who have the most to gain by deferring taxes as long as possible.

- **Order of withdrawals.** For those investors who do not have taxable assets with large embedded gains or considerations involving specific bequests, it is generally most tax-efficient to spend from taxable accounts before spending from tax-advantaged accounts, such as traditional and Roth IRAs (Jaconetti and Bruno, 2008). The goal is to let assets stay as long as possible in tax-advantaged accounts, where they can keep earning. In most situations, this practice improves the likelihood that the portfolio will not be depleted prior to the planning horizon.

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9 Studies (including Vanguard’s own research) have shown that the asset allocation decision is the most important determinant of the return variability and long-term performance of a broadly diversified portfolio engaged in limited market-timing (Davis, Kinniry, and Sheay, 2007; Brinson, Hood, and Beebower, 1986; Brinson, Singer, and Beebower, 1991; and Ibbotson and Kaplan, 2000).

10 For a full discussion of asset location, see Jaconetti, 2007b.
• **Rebalancing.** When an investor sells some portfolio holdings to meet spending needs, it is a good practice to choose holdings that will help rebalance the portfolio to the target allocation. This generally means that the investor will end up selling those assets that have recently performed well—something that can be emotionally difficult, but that will help keep the portfolio aligned with the investor’s goals and risk tolerance. Monitoring the portfolio on a semiannual or annual basis, and rebalancing it when the asset allocation differs from the target by 5% or more, produces an effective balance between risk control and costs (Tokat, 2007).

So how does an individual tie all of this together and implement a total-return spending approach? Cash flows, including all forms of fund distributions, can be directed to a spending account and available to meet spending needs. For additional portfolio cash flows, the individual can then set up a withdrawal program tailoring the payments to the desired amount and frequency. As outlined earlier, as part of this process the investor should also keep an eye on portfolio rebalancing and prudent spending thresholds.

For retirees who have assets in both taxable and tax-advantaged accounts, this process could be superior to an all-in-one fund—assuming that the investor has the desire and diligence needed to manage the portfolio.

**Guaranteed income: Immediate income annuities**

Many types of annuities are available to investors, and an analysis of all of them is beyond the scope of this paper. Instead, we will focus on income annuities, also known as immediate annuities because they begin payments upon purchase.11 Among income annuities, a distinction exists between those that offer fixed payments, which promise a certain dollar amount at each point in the future, and those offering variable payments, which promise uncertain (but formula-based) payments that will fluctuate depending on asset returns over time.

**Management by an advisor**

When can it make sense for an investor to pay an advisor to manage the portfolio? This is always a personal decision, and can be influenced by many factors. For example, some people feel overwhelmed by the prospect of balancing current and future income needs and dealing with other aspects of portfolio management, so they find value in working with a planning professional to create and manage a personalized investment portfolio. Some may have complex needs, such as estate planning and wealth transfer objectives, that require professional advice. And some may simply decide that they’d rather hand over the reins to a professional so that they can enjoy retirement without worrying over their investments.

Simply put, managing a spending program is a process that needs someone in charge: The individual either takes responsibility or else pays an advisor to do so. Of course an advisor can add value in other areas, such as investment selection, but it is often in the implementation of processes such as a tax-efficient spending program that an individual can find the most value in working with an advisor.

For investors deciding whether to engage an advisor, the two biggest considerations typically are costs and getting comfortable with the prospect of delegating portfolio management. An advisory relationship can have many benefits. The advisor will help to establish an asset allocation that, in addition to addressing spending needs, will help sustain the portfolio through changing financial market and tax environments. Over time, the advisor can adapt the investment and distribution program to meet the retiree’s own changing situation. The advisor also can help with balancing the individual’s current income needs and estate planning objectives, while providing for the portfolio’s long-term durability in dynamic, and uncertain, financial market and tax environments.

These benefits need to be carefully weighed against the costs, which vary among advisors.

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11 For a full discussion of income annuities, see Ameriks and Ren (2008).
When an investor purchases an income annuity, he or she is promised a stream of payments in exchange for the purchase price. Most often, the annuitant permanently surrenders a portion of his or her assets in exchange for an income stream that is to last for as long as he or she lives. Income annuities are a form of insurance against longevity risk—the risk that an individual will outlive his or her assets. In all cases, investors need to be aware that the guarantee of payment is subject to the claims-paying ability of the issuing insurance company. If the insurer fails, the payments could be reduced or stopped entirely.

Income annuities fall into one of two categories: life annuities, providing payments throughout the annuitant’s lifetime, and term-certain annuities, providing payments for a fixed period. The annuitant typically has the option of selecting payments that are fixed, graded, or inflation-adjusted. Payments can be made throughout the annuitant’s lifetime or with a joint-and-survivor option, in which payments continue after the death of the first annuitant. Payment levels can vary widely depending on the option chosen, as illustrated in Figure 5.

Because annuities are insurance products, purchasers should weigh the value of the insurance provided against the costs and risks that arise from provider fees, tax treatment, and the illiquid nature of an income annuity. Income annuities are not for everyone. But for those individuals who desire monthly payments, who are concerned about maintaining their spending levels very late into retirement (beyond normal life expectancies), and who are comfortable with the additional costs and risks, low-cost income annuities can be of value within a broader investment and spending plan.

These are a few guidelines for anyone considering an annuity:

- The longer one’s life expectancy, the higher the implicit rate of return on an income annuity.
- In general, those in poor health may not want to consider an annuity. If life expectancy is short, an annuity may be more costly than the anticipated benefit. (However, some annuity providers are starting to provide medical underwriting, which might lower the cost somewhat for this group.)
- Income annuities are appropriate only for those who can afford to part irrevocably with some of their assets. Since annuities are generally illiquid and irreversible, investors should consider annuitizing only part of their portfolios.
- Investors concerned with bequests to heirs will need to weigh the cost of an annuity in terms of the effect on their estate.
- In comparison with spending from an investment portfolio, annuity payments can result in greater tax costs for those in higher tax brackets (because, for tax purposes, annuity payments are treated as ordinary income).
- Considering an annuity that has an inflation rider is important. Over the long term, inflation can erode payments, and this can present a significant risk later in life, when the payments may be most needed. Without an inflation rider, the annuity payments may not keep up with the investor’s rising expenses, essentially defeating the purpose of buying the annuity in the first place.
The reality is that most individuals are already getting an income annuity through Social Security benefits, and some also have employer pensions. So in most cases, the question to ask is not “Do I need an annuity?” but rather “Do I need a higher guarantee as a floor for my base expenses?” If the answer is yes, then an inflation-adjusted income annuity may be worth considering.

It is very important to carefully review the terms of the contract provided by the insurance company. Investors should understand the costs associated with the guarantee of lifetime payments—both the obvious fees, such as the stated annual expenses, and the less-obvious (but arguably more significant) costs, such as the cost of illiquidity, provider risk, and taxes. Investors should also be familiar with the level of potential compensation provided by insurance guarantee funds in their state.

**Conclusion**

Generating income in retirement is not a new challenge; many generations of retirees have done so successfully using a variety of tried-and-true investment strategies. What is different today is that many more will be leaving the workforce with retirement benefits in the form of a lump sum instead of the traditional lifetime pension.

In deciding how to allocate their resources, retirees have a broad array of choices among highly effective portfolio-based and insurance-based options. Retirees should be aware of and understand these options, recognize the relative strengths and weaknesses of each approach as applied to their personal situations, and implement the strategy or combination of strategies that meets their goals—all built on a foundation of realistic long-term spending levels, diversification of risk, and prudent expectations for future market returns.

**References**


For more information about Vanguard funds, visit www.vanguard.com, or call 800-662-2739, to obtain a prospectus. Investment objectives, risks, charges, expenses, and other important information about a fund are contained in the prospectus; read and consider it carefully before investing.