

## Advisor Client Relationship Summary (Form CRS)

March 30, 2021

Vanguard Advisers, Inc. (VAI)

*Registered with the Securities and Exchange Commission (SEC) as an Investment Adviser.*

The services provided by an investment advisor and other financial services providers, like a broker-dealer, will differ, as well as the fees charged by such providers. It's important to understand who can provide you with the level of financial services and investment support you need at a price reasonable to you. The SEC makes free and simple tools and educational materials available to research firms and financial professionals at [investor.gov/CRS](https://investor.gov/CRS).

### What investment services and advice can you provide me?

We provide investment advisory services to retail investors through our Vanguard Personal Advisor Services® ("PAS") and Vanguard Digital Advisor® ("DA") programs.

In PAS, we provide ongoing advised account services. You'll work with a financial advisor, agree upon a financial plan and investment strategy, and grant us authority to trade your account(s) in accordance with that plan. We will not implement or change your plan without your approval. Our lead recommendations will normally be limited to certain Vanguard funds. We will monitor your accounts and rebalance, as needed, on a quarterly basis. PAS requires a minimum of \$50,000 of investable cash or securities in the advised portfolio.

In DA, we provide online financial planning tools designed to help you create and implement a personalized, goal-based investment plan. We'll monitor your enrolled accounts frequently using an algorithm. We'll have full investment discretion in order to rebalance and make trades as necessary to align your account(s) with your goal(s). We'll generally recommend combinations of Vanguard Total Stock Market ETF, Total International Stock ETF, Total Bond Market ETF, and Total International Bond ETF for retail accounts. Enrollment requires at least \$3,000 in a Vanguard Brokerage Account. For taxable accounts, the entire balance must be in the account's settlement fund. For IRAs, the entire balance must be in certain investment types and/or the account's settlement fund.

The services will require your accounts to be with Vanguard. Our lead investment recommendations will generally not include purchases of individual securities or bonds, CDs, options, derivatives, annuities, third-party mutual funds, closed-end funds, partnerships, or other non-Vanguard securities. For more information about the services, see the "Advisory business" and "Types of clients" sections of each brochure: PAS ADV Brochure [personal.vanguard.com/pdf/vpabroc.pdf](https://personal.vanguard.com/pdf/vpabroc.pdf) and DA ADV Brochure [vanguard.com/digitalbrochure](https://vanguard.com/digitalbrochure).

**Conversation Starters:** Consider these questions before choosing a financial service. You can see details at [investor.vanguard.com/financial-advisor/digital-advisor-details](https://investor.vanguard.com/financial-advisor/digital-advisor-details) and [investor.vanguard.com/financial-advisor/personal-advisor-details](https://investor.vanguard.com/financial-advisor/personal-advisor-details) or call us at the number provided below.



- Given my financial situation, should I choose an investment advisory service? Why or why not?
- How will you choose investments to recommend to me?
- What is your relevant experience, including your licenses, education, and other qualifications? What do these qualifications mean?

### What fees will I pay?

For PAS clients, the annual advisory fee starts at 0.30% of advised assets and decreases on a tiered level as advised assets increase. In addition, where mutual funds are held in your account (including Vanguard), there are built-in fees known as "expense ratios." These are the costs for the fund company to run a fund and will vary by fund, so your combined fees for advice and investments will vary.

For DA clients, the annual net advisory fee is approximately 0.15% of program assets, although this fee will vary based on the specific holdings in each account. The annual gross advisory fee for DA is 0.20%. We subtract any revenue we, or our affiliates, collect on assets held in investments in your portfolio in order to calculate your annual net advisory fee.

Fees are calculated on a rolling 90-day period based on your average daily balance in the portfolio over the entire fee period. We do not charge advisory fees on the balance of money market funds or other cash

equivalents held within your portfolio. As you invest more assets in the programs, the amount of fees we collect will increase; therefore, there could be incentive to encourage you to increase your assets.

There may be additional fees, including account service fees, and non-Vanguard fund fees, as discussed in more detail in the “Fees and compensation” section of each program’s Form ADV Brochure.

You will pay fees and costs whether you make or lose money on your investments. Fees and costs will reduce any amount of money you make on your investments over time. Please make sure you understand what fees and costs you are paying.



Help me understand how these fees and costs might affect my investments. If I give you \$10,000 to invest, how much will go to fees and costs, and how much will be invested for me?

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### **What are your legal obligations to me when acting as my investment advisor? How else does your firm make money and what conflicts of interest do you have?**

When we act as your investment advisor, we have to act in your best interest and put your interests ahead of ours. At the same time, the way we make money creates some conflicts with your interests. You should understand and ask us about these conflicts because they can affect the investment advice we provide you. Here are some examples to help you understand what this means:

- Our lead advice will be to invest in Vanguard funds. You will pay the funds’ expense ratios. The funds’ expense ratios are received by The Vanguard Group, Inc., as revenue. DA reimburses any revenue received by Vanguard from the gross advisory fee.
- We’ll also require your advised assets to be in accounts held with our affiliates. Those accounts may be subject to additional fees, like account service fees, commissions, and other charges and processing fees. If you were to transact in non-Vanguard funds through a Vanguard Brokerage Account, another of our affiliates, Vanguard Marketing Corporation, may receive transaction fees, front-end and back-end loads, sales charges, 12b-1 fees, and revenue-sharing payments from certain non-Vanguard funds.

See the “Fees and compensation” section of each program’s Form ADV Brochure for more details on how we and our affiliates make money and the conflicts involved.



How might your conflicts of interest affect me, and how will you address them?

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### **How do your financial professionals make money?**

Our advisors servicing PAS are salaried employees who do not earn commissions or additional compensation based on the products they recommend or the amount of assets they service.

Our DA service does not employ financial professionals who directly advise or manage individual client accounts. The professionals responsible for the service and its methodology are salaried employees who do not earn commissions or additional compensation based on the products they recommend or the amount of assets serviced.

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### **Do you or your financial professionals have legal or disciplinary history?**

Yes. For more information related to legal or disciplinary history disclosure go to [investor.gov/CRS](https://investor.gov/CRS). There, you will find a free and simple search tool to research us and our financial professionals.



As a financial professional, do you have any disciplinary history? For what type of conduct?

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For more information regarding our advisory services, obtain a copy of Form ADV or Form CRS from [adviserinfo.sec.gov](https://adviserinfo.sec.gov), or contact us at 800-523-9447 to request a copy.



Who is my primary contact person? Is he or she a representative of an investment advisor or a broker-dealer? Who can I talk to if I have concerns about how this person is treating me?

# Vanguard Personal Advisor Services Brochure

September 28, 2021

Vanguard Advisers, Inc.  
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This brochure provides information about the qualifications and business practices of Vanguard Personal Advisor Services®, an advisory service offered through Vanguard Advisers, Inc. (“VAI”), (also referred to herein as “we,” “us,” and “our”). This brochure also describes how VAI is compensated for the service provided to you. You should carefully consider this information in your evaluation of the service. If you have any questions about the contents of this brochure, please call us at the phone number above. The information in this brochure hasn’t been approved or verified by the U.S. Securities and Exchange Commission (“SEC”) or by any state securities authority.

Additional information about VAI is available on the SEC’s website at [adviserinfo.sec.gov](http://adviserinfo.sec.gov).

VAI is a registered investment advisor with the SEC. Registration doesn’t imply a certain level of skill or training.

**Material changes:** The brochure has been materially amended to include information regarding wash sale avoidance practices and to update the list of qualified custodians. Additional updates also include an enhancement to our methodology for active equity portfolio allocations, a process update for handling certain transactions during a portfolio rebalance, and a reorganization of the Investment Risks section.

## Advisory business

VAI is a Pennsylvania corporation that provides investment advisory services to a wide variety of clients.

These advisory services include:

- **Stable Value:** discretionary investment advisory services to separate accounts that are offered as investment options in state-sponsored education savings plans (“529 Plans”);
- **Vanguard Institutional Advisory Services:** discretionary and nondiscretionary advisory services and administrative services to institutional clients such as endowments, foundations, employee benefit plans and trusts, and family offices;
- **Vanguard ETF Strategic Model Portfolios:** model portfolios composed of Vanguard® Funds and exchange-traded funds (“ETFs”) (as defined below) as well as mutual funds and ETFs managed by third-party asset managers that are accessed by third-party intermediaries through third-party platforms;

- **Interactive Advice Tools:** Personal Online Advisor (“POA”) is a nondiscretionary advisory service previously offered to certain retail clients and currently to participants of eligible employer-sponsored retirement plans. POA is sub-advised by Financial Engines Advisors, LLC (“FE”), an independent investment advisory unaffiliated with VAI;
- **Vanguard Personal Advisor Services (“PAS”):** ongoing advised account services and point-in-time advice services for certain retail clients and participants in eligible employer-sponsored retirement plans;
- **Vanguard Digital Advisor®:** discretionary advisory service offered to retail clients and to participants of eligible employer-sponsored retirement plans;
- **Vanguard Situational Advice:** point-in-time, nondiscretionary advice services and financial planning offered to participants in certain employer-sponsored retirement plans; and
- **Vanguard Managed Account Program (“VMAP”) and POA:** VMAP is a discretionary advisory service offered to participants of eligible employer-sponsored retirement plans. POA is a nondiscretionary advisory service offered to participants of eligible employer-sponsored retirement plans. VMAP and POA are sub-advised by FE.

As an SEC-registered advisor, VAI has a fiduciary duty to act in its clients’ best interests and to abide by the duties of care and loyalty. VAI was incorporated in and has been in business since 1995. VAI is 100% owned by Goliath, Inc., a Delaware corporation. Goliath is 100% owned by The Vanguard Group, Inc. (“Vanguard”). As such, VAI is an indirect, wholly owned subsidiary of Vanguard, the sponsor and manager of the family of mutual funds and ETFs comprising The Vanguard Group of Investment Companies (“Vanguard Funds”), which VAI typically recommends as investments. Please see the section of this brochure titled “Other financial industry activities and affiliations” for more information.

## Vanguard Personal Advisor Services

Vanguard Personal Advisor Services, launched by VAI in 2015, provides ongoing advised account services for Vanguard Retail Investor Group (“RIG”) clients (“RIG Clients”) and for participants in certain employer-sponsored retirement plan accounts (“Plan Accounts”) for which Vanguard Institutional Investor Group (“IIG”) provides recordkeeping services (“IIG Clients”) who enroll in Vanguard Personal Advisor Services. The service also provides point-in-time

advice and financial planning services to participants in eligible employer- sponsored retirement plans. VAI uses the same methodology to generate financial plans for clients enrolled in the Personal Advisor Services ongoing advised account service as it does for participants engaging the point-in-time advice and financial planning service.

### **Point-in-time advice and financial planning for plan participants**

Participants in eligible employer-sponsored retirement plans can engage Personal Advisor Services in a discussion with a financial planner for point-in-time advice, which includes addressing specific investment-related questions or topics, or providing nondiscretionary investment strategies for their employer-sponsored retirement accounts based on personalized financial plans created by VAI. The financial plan discussed in this section is always a point-in-time financial plan. In choosing to receive a financial plan, an IIG Client will provide us with information relating to their financial situation, investment objectives, and willingness and ability to tolerate risk. VAI will then formulate a financial plan for them that will recommend an asset allocation and specific investments they can maintain in their employer-sponsored retirement account to meet that allocation. Financial plans generated for participants will recommend an allocation from among the investment options selected by the plan fiduciary that make up the plan's lineup and will typically recommend a combination of specific Vanguard Funds based on their low cost and broad diversification unless the plan lineup only includes company stock or third-party mutual funds or lacks the necessary Vanguard Funds needed to complete the recommended asset allocation. The financial plan will also include advice about how to allocate future contributions to an IIG Client's retirement plan. IIG Clients are able to impose reasonable restrictions on our investment strategy, which may include the ability to accommodate non-Vanguard securities in their financial plans (read the section of this brochure titled "Reasonable restrictions" for more information). Within the financial plan, we'll also use the information an IIG Client provided to us to generate goals-based forecasting and recommendations on how to better meet their investing goals, based on their situation and goals at the time they engage the service. A financial plan will be finalized after a consultation with an advisor from Personal Advisor Services. More information about the methodology used to create the financial plan is provided in the sections of this brochure that follow the heading "Methods of analysis, investment strategies, and risk of loss" below.

Keep in mind that if an IIG Client receives one-time advice or a financial plan for their employer-sponsored retirement account, they'll need to implement transactions and rebalance their account on an ongoing basis in accordance with the financial plan. We won't monitor the employer-sponsored retirement account or financial plan; seek to determine whether the IIG Client may have experienced material changes to their financial situation, investment objectives, and willingness and ability to take risk; or initiate transactions in their account. An IIG Client will be solely responsible for initiating all transactions and implementing

the other recommendations provided in the financial plan. When fulfilling an IIG Client's direction to include company stock in a financial plan, we will not consider company stock ownership limits or restrictions imposed by federal securities laws or company policies, and IIG Clients should consult their plan rules prior to implementing the financial plan.

### **Ongoing advised account services**

By choosing to engage Personal Advisor Services for ongoing advised services, you'll provide us with information relating to your financial situation, investment objectives, and willingness and ability to take risk. Certain IIG Client information may be provided by or obtained directly from the retirement plan sponsor. A financial plan will then be formulated for you that will recommend an asset allocation, and investments will be maintained in your account(s) to meet that allocation.

For RIG Clients, our lead investment recommendations will normally be limited to allocations in certain Vanguard Funds, based on their low cost and broad diversification, and won't include recommendations to purchase individual securities or bonds, CDs (certificates of deposit), options, derivatives, annuities, third-party mutual funds, closed-end funds, unit investment trusts, partnerships, or other non-Vanguard securities. In particular, we'll recommend varying combinations of Vanguard Total Stock Market Index Fund, Vanguard Total International Stock Index Fund, Vanguard Total Bond Market Index Fund, and Vanguard Total International Bond Index Fund, or their respective ETF share classes (collectively referred to as the "Four Totals") for clients who select our lead investment methodology for passive index investing. Beginning on or after November 9, 2021, we will offer an active risk assessment tool on a pilot basis to a limited number of clients who may be interested in active equity investing as a complement to their passive equity allocation. The assessment will evaluate a RIG Client's cost sensitivity, investing patience, and active risk tolerance, which are important characteristics in determining the suitability of including active equity in a Portfolio. The results of the active risk assessment are an input into the proprietary Vanguard Asset Allocation Model ("VAAM") which allows Personal Advisor Services to access a RIG Client's risk tolerance, inclusive of active versus passive preference, and map those preferences to an appropriate model-driven equity allocation target. RIG Clients are also able to impose reasonable restrictions on our investment strategy, which may include the ability to accommodate non-Vanguard securities in their financial plans (read the section of this brochure titled "Reasonable restrictions" for more information).

Each of the Four Totals is a share class of mutual funds that are used or are substantially similar to the mutual funds used to meet the allocations underlying certain Vanguard single- fund solutions, such as Vanguard Target Retirement Funds. In certain circumstances, the recommended Portfolio for a client who selected our lead investment methodology for passive index investing will contain identical allocations to the Four Totals that would've been used as the underlying investments in a Vanguard single-fund solution purchased by that investor. When considering whether to enroll in the

ongoing advised service, you should consider that you will pay both the Personal Advisor Services advisory fee and Vanguard Fund or ETF expense ratios upon enrollment in exchange for receiving access to an advisor, personalized features, and additional services offered to Personal Advisor clients. In comparison, an investor who decides to not enroll would have access to many of the same Vanguard funds without the payment of the Personal Advisor Services advisory fee, but would also not have access to an advisor, personalized features, and additional services offered to Personal Advisor clients.

We recognize that RIG Clients may experience costs and tax consequences associated with selling their existing securities positions to implement our lead advice recommendations. As such, we'll weigh the costs of transitioning the securities a RIG Client holds before enrolling in the ongoing advised service using a breakeven cost analysis. If the securities held before enrolling in the ongoing advised service pass our breakeven cost analysis, we'll recommend that a RIG Client continue to hold all or a portion of such securities, subject to our portfolio construction guidelines. If they fail the breakeven cost analysis, we'll recommend that a RIG Client sell those positions and implement our lead advice recommendations. If a RIG Client wants to retain some or all of those positions that fail the breakeven cost analysis, we may accommodate such requests provided they don't violate our Portfolio construction guidelines. Read the section below titled "Reasonable restrictions" for additional information about imposing restrictions on our investment strategy. Even in situations where a Portfolio continues to hold securities purchased before enrolling in the ongoing advised service, we'll recommend that any additional purchases in a RIG Client's advised Portfolio (as defined below) be made into Vanguard Funds.

Our lead investment recommendations for IIG Clients will normally be limited to allocations in certain Vanguard and non-Vanguard mutual funds, collective investment trusts, or stable value funds, and will not include recommendations to purchase individual securities (with the exception of reasonable restrictions for company stock) or bonds, CDs, options, derivatives, annuities, closed-end funds, unit investment trusts, or partnerships. IIG Clients are able to impose reasonable restrictions on our investment strategy, which may include the ability to accommodate non-Vanguard securities or company stock in their financial plans (read the section of this brochure titled "Reasonable restrictions" for more information). Investment recommendations generated for IIG Clients in Plan Accounts will recommend an allocation based on the investment options selected by the plan fiduciary as the plan core lineup and will typically recommend a combination of specific Vanguard Funds or affiliated collective investment trusts based on their low cost and broad diversification, if available in the Plan Accounts. A plan sponsor has discretion over the investment choices made available within a plan. Changes to a fund lineup could impact the funds recommended within a financial plan. We will select 401(k) account investments based on their asset allocation alignment with the methodology outlined in

"Methods of analysis, investment strategies, and risk of loss" below. Investments that are not affiliated with Vanguard may be included in a Portfolio to meet the allocation if they are made available as part of a plan lineup of investment choices and including them is necessary to meet our recommended asset allocation for a Portfolio.

IIG Clients may not be eligible to enroll or remain enrolled if the plan lineup only includes company stock or third-party investments that lack the asset allocation exposure required by our investment strategy. Additionally, IIG Clients may be unenrolled from Personal Advisor Services if their plan fiduciary changes the core plan lineup and there are insufficient investment options to complete the recommended asset allocation. IIG Clients in Plans that offer self-directed brokerage options within the Plan will be ineligible to enroll in Personal Advisor Services.

Where an IIG Client's Plan Account becomes covered by another Plan, and all of the assets of the advised account are automatically transferred to a second plan (other than to a qualified default investment alternative), the Plan Account will remain as an advised account under the applicable terms of this Brochure.

A financial plan for a RIG Client or IIG Client will be finalized after consultation with an advisor from Personal Advisor Services. If eligible, you can choose to forego scheduling an initial or follow-up advisor consultation and instead enroll in the ongoing advised service using our digital enrollment process. If you have any questions throughout the process, you'll always have the option to speak with an advisor. You'll also be given the opportunity to preview our initial financial plan to determine whether to enroll in the ongoing advised service. Be aware, however, that we may not have an opportunity to refine and tailor the initial financial plan if you decline to enroll in the ongoing advised service, and the initial financial plan's suitability to your financial situation may be limited as a result. Within five business days of accepting the terms of the financial plan and enrolling in the ongoing advised service, we'll initiate steps to begin the necessary transactions to create the mix of Vanguard Funds or other securities recommended to meet the asset allocation selected for your account(s) designated as part of your financial plan. Changes to the investment strategy set forth in the financial plan will be made only with your input and consent, which makes it extremely important that you immediately notify us of material changes to your financial situation, investment objectives, and willingness and ability to take risk. Collectively, the accounts enrolled in the ongoing advised service where we make recommendations to maintain your target allocation will be referred to herein as the "Portfolio." Once you've agreed to ongoing advisement of the Portfolio, we'll provide regular monitoring and quarterly review of the financial plan, and rebalancing, if needed, of the Portfolio pursuant to the standing instructions you approve in the financial plan.

By enrolling in the ongoing advised service, you're granting us authority to purchase and sell the securities identified in your financial plan on your behalf. Accordingly, we may

recommend changes to the investments used to effect the investment strategy set forth in the financial plan, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If we recommend such a change, we'll notify you at least 30 days before the change is implemented. Any notice of a proposed change in investments will include the effective timeline for the proposed change, instructions you can follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed your consent to the proposed change in investments.

Within the financial plan, we'll also use the information you provide to us to create goals-based forecasting and recommendations on how to better meet your investing goals, based on your situation at the time you engage the service. Your financial plan can include multiple investing goals that meet your particular financial situation, such as planning for college, saving for a home, establishing a rainy-day fund, saving for retirement, or managing your assets in a trust. Your goals may be supported by your Portfolio as well as accounts held outside of the Portfolio. More information about the methodology used in creating the financial plan is provided in the sections of this brochure under the heading "Methods of analysis, investment strategies, and risk of loss" below.

The ongoing advised service also offers a web experience that includes content based on your goals and provides personalized reporting. The web experience is accessed by logging in to your account at [vanguard.com](http://vanguard.com). Certain account registrations, such as irrevocable trusts or entity-type registrations, may prevent you from using the web experience. For clients enrolled in the ongoing advised service, we'll contact you, at least annually, via email, digital interface, or phone, to validate your financial planning needs and the strategy chosen for the Portfolio for the purposes of determining whether there have been any changes in your financial situation, risk tolerance, tax situation, investment time horizon, investment objectives, or desired reasonable restrictions that may require a new financial plan for your review and approval. Again, it's critical that you interact with us during these attempts to validate your financial planning needs and the strategy chosen for the Portfolio, or whenever you believe that you may have experienced material changes to your financial situation, investment objectives, and willingness and ability to take risk, to ensure your financial plan is appropriately tailored. If you fail to validate your current investor profile or respond to our attempts to schedule and conduct an annual review, we'll assume there have been no changes, and we'll continue in accordance with your approved financial plan.

In connection with the ongoing advised service, you'll retain the right to: (i) withdraw securities and take sales proceeds as cash from the Portfolio; (ii) vote on shareholder proposals of beneficially owned securities or delegate the authority to vote on such proposals to another person; (iii) be provided, in a timely manner, with a confirmation or other notification of each securities transaction in the Portfolio and all other documents required by law to be provided to security holders;

and (iv) proceed directly as a security holder against the issuer of any security in the Portfolio and not be obligated to join any person involved in the operation of the service, or any other client of the service, as a condition precedent to initiating such proceeding. Any distributions, withdrawals, or loan transactions related to an IIG Client account will continue to be subject to the terms of your plan.

Vanguard Personal Advisor Services offers different asset-based service models to clients enrolled in the service. Clients with Portfolio securities ranging in value from \$50,000 to \$500,000 are assigned to a team of financial advisors. Clients with Portfolio securities of more than \$500,000 receive an assigned financial advisor. All Personal Advisor clients have the ability to call and schedule an appointment with an advisor at any time. Additional information about fee tiers based on Portfolio size are included below in the "Fees and compensation" section.

Before enrolling in the ongoing advised service, potential clients should consider paying off high-interest debt.

#### **Estimated capital gains and MinTax cost basis method**

For RIG Clients, we'll provide an estimate of the capital gains and/or losses you may realize if you implement the recommendations in your financial plan. If the cost basis of a particular security is unknown, we'll assume the entire position is held at a gain (meaning we'll assume the cost basis for that security is zero). Actual capital gains and/or losses may differ from the estimates because they're based on the price of the security at the time of sale. While the ongoing advised service will weigh the tax effect of potential Portfolio changes, transitioning the Portfolio based on our portfolio construction guidelines could result in realized taxable gains or losses, or the generation of taxable dividend income or tax-preference items that are taxable under the alternative minimum tax. Neither VAI nor any affiliated entity will have any responsibility to pay these taxes.

Our initial financial plan for a RIG Client will use average cost as its cost basis method to estimate gains and losses potentially realized due to implementation. Once a RIG Client accepts the financial plan and enrolls in the ongoing advised service, we'll use the MinTax cost basis method to perform the necessary transactions within their taxable accounts to construct their Portfolio and on an ongoing basis for all transactions in securities held in their taxable accounts in the Portfolio unless they affirmatively opt out of such method. If a RIG Client affirmatively opts out of MinTax, we'll revert to using average cost as the cost basis method to calculate estimated gains and losses and for implementing the Portfolio and performing transactions in securities held in taxable accounts in the Portfolio.

The MinTax cost basis method is generally designed to minimize tax impact and lower an individual's tax burden by identifying selective units or quantities, also referred to as lots, of securities to sell in any sale transaction (including rebalancing) based on specific ordering rules. In many cases, the MinTax cost basis method will minimize the tax impact from a transaction, but it may not do so in every case. For example, if the taxable accounts within a Portfolio have a

position held with a small short-term capital loss and a large long-term capital loss, the MinTax cost basis method will choose to sell the position held at a small short-term capital loss first. The method's effectiveness at minimizing taxes will vary depending on individual circumstances.

RIG Clients should consult with a tax advisor to discuss whether the MinTax cost basis method is appropriate given their individual circumstances. Please refer to the Service Agreement for Vanguard Personal Advisor Services for more information about the MinTax cost basis method. VAI doesn't provide tax advice, nor does the ongoing advised service's use of the MinTax cost basis method constitute tax advice.

#### **Additional information for Vanguard individual retirement account ("IRA") holders and IIG Clients**

VAI intends Vanguard Personal Advisor Services to be a level-fee-eligible investment advice arrangement and to comply with the conditions of the statutory exemption for eligible investment advice arrangements under Sections 408(b)(14) and (g) of the Employee Retirement Income Security Act ("ERISA") and Sections 4975(d)(17) and (f)(8) of the Internal Revenue Code (the "Code"). In providing advice for assets held in IRAs, or with respect to assets held in eligible employer-sponsored retirement plans as defined in Section 3(2) of ERISA, VAI will act as a fiduciary advisor as defined under Section 408(g)(11) of ERISA and Section 4975(f)(8)(J) of the Code and, therefore, VAI must act prudently and only with clients' interests in mind when providing clients recommendations about investment of those assets. Additionally, Personal Advisor Services will be audited annually by an independent auditor for compliance with the requirements of the statutory level-fee exemption and related regulation. Clients who have received our advice with respect to securities held in IRAs or Plan Accounts during a calendar year will receive a copy of the most recent version of the auditor's findings published in the next calendar year within 30 days of our receipt of the report. Sponsors of eligible employer-sponsored retirement plans that make Vanguard Personal Advisor Services available to participants during a calendar year will also receive a copy of the most recent version of the auditor's findings published in the next calendar year within 60 days of our receipt of the report.

#### **Spending Fund**

The ongoing advised service will recommend that RIG Clients establish a new money market fund, or designate an existing money market fund, to facilitate cash flow into and out of the Portfolio, herein defined as a "Spending Fund." If a RIG Client establishes a Spending Fund, any additional cash added to their Portfolio will remain in the Spending Fund until the total amount of assets in the Spending Fund exceeds their agreed-upon maximum limit (the "Upper Threshold"). When the Upper Threshold is exceeded, their Spending Fund balance will be reduced to the agreed-upon target amount (the "Target Balance") and the additional assets will be invested according to the terms of their current financial plan. A RIG Client can also establish an agreed-upon minimum limit for the Spending Fund (the "Lower Threshold"). When the balance of the Spending Fund falls below the Lower Threshold, an advisor will act in accordance with the current

financial plan to rebalance and/or sell securities to reach the Target Balance in the Spending Fund. Spending Fund processes don't apply to IIG Clients, or those participants who engage the service for one-time advice or financial plans.

#### **Transferring cash or securities to and from the Portfolio**

While enrolled in the ongoing advised service, RIG Clients can transfer cash or securities to and from the Portfolio at any time, and can add or remove accounts at any time, provided they give us prior notice by contacting us. Transfers of cash out of a Portfolio typically take two business days to occur (subject to the settlement of securities transactions in your Portfolio). Market closures will delay the settlement of securities transactions, which will, in turn, delay the transfer of cash out of an account. RIG Clients with Portfolio securities ranging in value from \$50,000 to \$500,000 can schedule an appointment with an advisor by logging in to their Vanguard accounts and selecting "Manage appointments" to choose a convenient time for an advisor to call them, or by calling us at 800-992-5541. RIG Clients with Portfolio securities in excess of \$500,000 can contact their advisor directly by phone or by scheduling an appointment.

For RIG Clients, cash transferred to the Portfolio will be deposited into their Spending Fund (as defined above), an existing money market fund, or a settlement fund in a Vanguard Brokerage Account where a Spending Fund has not been established. If RIG Clients don't have a Spending Fund, existing money market fund, or settlement fund in a Vanguard Brokerage Account, they hereby agree to establish, at the time of transfer, an account in Vanguard Federal Money Market Fund for the purpose of accepting their transfer of cash into the Portfolio. Within two business days of cash being deposited (except for deposits resulting from automated account services) by a RIG Client, the advisor will be notified of the available cash and will take steps to begin investing the cash within five days in accordance with the financial plan and our procedures for rebalancing. See the section of this brochure entitled "Rebalancing the Portfolio" for details. When cash is transferred to the Portfolio as a result of automated account services (such as an automatic investment plan) or investment earnings (such as interest or dividend payments), the cash will be allocated in accordance with the RIG Client's financial plan upon their next rebalancing opportunity, or as otherwise agreed upon with an advisor. For IIG Clients, employer Plan Account contributions will be allocated according to the financial plan's target asset allocation. Plan Account contributions will be invested on the business day on which such contributions are sent by the Plan Sponsor to Vanguard,

IIG Clients who initiate a rollover from a Plan Account to an IRA or Roth IRA will experience a delay of up to five business days to allow for the service to assess and collect any fees due.

For purchases into Vanguard Funds in the Portfolio and other transfers of securities worth more than \$100 by RIG Clients, we will initiate steps to begin investing within five business days of the purchase or transfer according to the terms of

the current financial plan and our procedures for rebalancing. See the section of this brochure entitled “Rebalancing the Portfolio” for details. If securities are transferred that aren’t part of the established financial plan, an advisor will initiate steps within five business days to contact the RIG Client regarding the handling of those securities. The advisor will not sell or move these securities without the RIG Client’s consent. Any transfers of securities worth less than \$100, except for cash transfers deposited into a Spending Fund, will be allocated in accordance with the RIG Client’s financial plan upon their next rebalancing opportunity.

If you haven’t established a financial plan, securities will be held in kind until you establish a financial plan for such assets. We reserve the right to reject the transfer of certain securities. RIG Clients may work with an advisor to establish an alternate timing for the investment of additional cash, Vanguard Funds, or other securities transferred to your Portfolio. The processes regarding the transfer of cash and securities to and from the Portfolio don’t apply to those clients or participants who only receive a financial plan and decide not to enroll in the ongoing advised service.

#### **Purchase and sale of securities in a Portfolio**

If a RIG Client processes a transaction in a Vanguard Brokerage Account enrolled in the ongoing advised service and doesn’t have sufficient funds to settle the transaction, an advisor will raise settlement proceeds by selling a portion of the largest position in the affected account based on our drawdown hierarchy methodology discussed below. The processes regarding the purchase of securities in a Portfolio don’t apply to those clients or participants who only receive a financial plan and decide not to enroll in the ongoing advised service.

When selling securities from the Portfolio during rebalancing or a Spending Fund replenishment, or when raising cash for a onetime withdrawal, securities will be sold according to the following drawdown hierarchy, as applicable: securities held in IRAs and Plan Accounts subject to required minimum distributions (RMDs) up to the RMD limit, securities held in taxable accounts, securities held in tax-deferred accounts, and then securities held in tax-free (Roth) accounts. You can work with an advisor to customize your drawdown hierarchy when you need to sell securities. The client designated as the “Primary Advice Client” in Your Service Agreement for Vanguard Personal Advisor Services can accept or customize the drawdown hierarchy and direct withholding elections for all accounts in the Portfolio, including accounts owned solely by the Secondary Advice Client. The drawdown hierarchy aims for tax efficiency but may not be equitable in relation to the accounts owned by a Primary Advice Client versus those owned by a Secondary Advice Client, meaning that one individual’s account could be depleted before securities are sold from the other’s accounts. Security selection will vary depending upon the account from which it is being withdrawn.

We will perform certain Vanguard fund transactions in your Portfolio in a manner that attempts to reduce the number of wash sales you may experience. A wash sale results from selling a security at a loss in a taxable account and repurchasing it, or one the IRS considers “substantially

identical,” in the same or another account within 30 days before or after you made the sale. Since the IRS won’t allow you to claim the loss generated by the sale on that year’s tax return, it’s important to limit these transactions. The effects of a purchase in a taxable account that leads to a wash sale may only be temporary, as you are permitted to add the loss from the sale to the cost basis of the security you purchased, and the holding period of the security you sold will also be added to the holding period of the purchased security. A purchase in a tax-advantaged account leading to a wash sale, though, will cause you to permanently lose the ability to claim the original loss.

Where you previously sold a Vanguard fund at a loss in an advised taxable account in the Portfolio within the prior 30 days, we will, where necessary and appropriate, recommend the purchase of an alternate Vanguard fund (a “surrogate Vanguard fund”) if such purchase is planned to take place in an advised taxable account or advised individual retirement account in the Portfolio and if the Service would have otherwise recommended a repurchase of the same Vanguard fund that was originally sold at a loss. By recommending the purchase of a surrogate Vanguard fund, we are attempting to mitigate the circumstances when you will experience a wash sale in your Portfolio.

Where you previously purchased a Vanguard fund in an advised taxable account or advised individual retirement account in the Portfolio and we recommend the sale of a security within the same asset or sub-asset class within 30 days of such purchase, we will, where necessary and appropriate, attempt to sell another holding in lieu of selling the recently purchased Vanguard fund if such sale is planned to take place in an advised taxable account and would result in a loss. By attempting to avoid the sale of the recently purchased Vanguard funds, we are attempting to mitigate the circumstances when you will experience a wash sale in your Portfolio.

There are several limitations on our ability to perform Vanguard fund transactions in your Portfolio in a manner that attempts to reduce the number of wash sales. First, we will only monitor for wash sale compliance in advised taxable and advised individual retirement accounts that are part of a Portfolio governed by the same Service Agreement for Personal Advisor Services. Second, we are not currently able to monitor the transaction history in any employer-sponsored retirement plan accounts held as part of your Portfolio. This means that we will not look at any recent activity performed in an advised retirement plan account in determining whether to sell a Vanguard fund in an advised taxable account at a loss. Further, we will not recommend the purchase of a surrogate Vanguard fund in your advised retirement plan account where you recently sold a Vanguard fund in an advised taxable account at a loss. Third, we will not seek to avoid wash sales in situations where you previously instructed us to sell a particular Vanguard fund. Fourth, we will not seek to avoid wash sales when we are attempting to locate investments in account types that are appropriate for that security type (see the section entitled “Rebalancing the Portfolio” for more information). Fifth, we will not seek to avoid wash sales in situations where the only alternative to a wash sale is to sell



another holding at a taxable gain. Finally, we will not seek to avoid wash sales in situations where we are required to sell to maintain your recommended asset allocation and the only Vanguard fund available for sale will cause a wash sale.

While the avoidance of wash sales provides tax benefits for you, some of the surrogate Vanguard funds have higher expense ratios than the lead Vanguard funds we normally recommend. Further, the underlying securities owned by the surrogate Vanguard funds are different from the holdings of the lead Vanguard funds, which introduces some tracking error into your portfolio.

### Restrictions on Portfolio accounts

While enrolled in the ongoing advised service, you shouldn't purchase or sell securities in your Portfolio without prior assistance from an advisor, and you may be restricted from such activity until you terminate the ongoing advised service. Upon your instruction to terminate the ongoing advised service, we'll initiate steps to begin restoring full access to your accounts, and during such transition back to a self-directed portfolio you can contact a Vanguard representative at any time to place orders. Transactions performed in a Portfolio enrolled in the ongoing advised service without prior notice to us may be reversed or unwound to maintain the recommended allocation for your Portfolio. Other account transactions or services, like automatic trading services (such as automatic investment/withdrawal), will be restricted or unavailable through the web experience but can be processed or enabled with the assistance of an advisor. In addition, IIG Clients will be restricted from self-provisioning for exchanges, allocation changes, Roth conversions, loans, withdrawals, rollovers, liquidations, and signing up for rebalancing services. Other actions requiring advisor assistance include cost basis provisioning, dividend and capital gains distribution elections, and setting RMD payments.

You may not receive third-party discretionary advice on securities held in the Portfolio under the ongoing advised service. If you want to receive third-party discretionary advice about certain securities in the Portfolio, we can assist you in transferring those securities to an account outside of the Portfolio, or you can choose to terminate the ongoing advised service. You can arrange separately for the provision of advice by another provider that has no material affiliation with, and receives no compensation in connection with, the securities held in your account(s).

As of December 31, 2020: Vanguard Personal Advisor Services offered under Vanguard Advisers, Inc. ("VAI"), had a total of \$148.6 billion in assets under management.

## Fees and compensation

### Advisory fee

The annual advisory service fee paid to VAI for clients enrolled in the ongoing advised service will be tiered as follows:

- 0.30% on Portfolio's assets below \$5 million
- 0.20% on Portfolio's assets between \$5 million and \$10 million
- 0.10% on Portfolio's assets between \$10 million and \$25 million
- 0.05% on Portfolio's assets above \$25 million

For example, consider a client with \$15 million in a Portfolio of advised assets under the Service. The client would generally experience the following fee:

- 0.30% on the first \$5 million = \$15,000
- 0.20% on the next \$5 million = \$10,000
- 0.10% on the next \$5 million = \$5,000

For a total advisory fee of \$30,000 annually.

In most cases, Portfolios of \$5 million and above will be serviced by Vanguard National Trust Company ("VNTC"), an affiliate of VAI that offers its own version of Vanguard Personal Advisor Services to its client base. Read the section below titled "Other financial industry activities and affiliations" for additional information about VNTC.

The advisory fee will be calculated on a rolling 90-day period based on your average daily balance in the Portfolio across the entire fee period and will begin accruing on your plan implementation date (the first day after enrollment in the Service when we begin processing trades in your Portfolio). The advisory fee for each fee period will be assessed on the first business day (a list of observed U.S. holidays is available on the New York Stock Exchange's website, available at [nyse.com/markets/hours-calendars](http://nyse.com/markets/hours-calendars)) after the last calendar day within each fee period and will generally be deducted within two weeks of assessment.

A total advisory fee will be calculated across all securities in the Portfolio, with the exception of money market fund positions. VAI won't assess an advisory fee on the balance of money market fund securities held within the Portfolio. Unless you speak with your advisor about setting up a customized method for withdrawing the advisory fee from your Portfolio, VAI will select the designated fee account(s) of the Portfolio from which the advisory fee will be deducted and then will systematically determine which securities to sell to raise proceeds sufficient to cover the advisory fee. When we choose to withdraw the advisory fee from your taxable accounts, we'll first sell any money market funds held in those accounts. If we still need to raise proceeds after selling any money market funds, we'll next sell any securities held in your Portfolio at a loss. When we look for securities held at a loss, we'll prioritize the sale of any nondiversified securities held in your taxable accounts before the sale of diversified holdings. We'll continue to sell securities held at a loss until the advisory fee is covered, until you no longer hold any securities at a loss, or if additional sales of such securities held at a loss will cause a sub-asset class of securities to become underweighted relative to the

other sub-asset classes of the Portfolio (e.g., if we sell too many domestic equity securities, your Portfolio will become out of balance). In either case, if we need to raise additional proceeds, we'll next sell any securities held in your Portfolio at a taxable gain.

In the event we're unable to systematically remove the advisory fee from your taxable accounts, we'll employ a manual process for determining which securities to sell. Our manual process is based on a fee withdrawal hierarchy of expected fund volatility from least to most volatile. The fee withdrawal hierarchy prioritizes the sale of mutual funds with relatively low volatility and expected tax consequences over funds with higher volatility and potential embedded gains.

Please be advised that our systematic and manual advisory fee withdrawal hierarchies for taxable accounts aren't designed to withdraw fees proportionally from the accounts in your Portfolio; in some circumstances our fee logic will cause all of the Portfolio's advisory fee to be withdrawn from a single taxable account. When a Portfolio is comprised of accounts owned by different advice clients, this may mean the account or accounts of one advice client will bear the advisory fee for the entire Portfolio.

Unless the only account in the Portfolio is an IRA or you speak with your advisor about setting up a customized methodology for withdrawing the advisory fee from your Portfolio, we won't select the IRA as the account from which the advisory fee should be deducted. In the case of multiple IRAs only in the Portfolio, the advisory fee will be taken proportionally from all of the IRAs in the Portfolio. When we choose to withdraw the advisory fee from your IRAs, we'll sell any securities held in an overweight sub-asset class, prioritizing the sale of any nondiversified securities held in your IRAs before the sale of diversified holdings.

We reserve the right to change the annual service fee upon 30 days' written notice to you. Upon removal of an account, or termination of the ongoing advised service, we'll require payment of any accrued fees from the time of the last quarterly payment until the termination date. We may offer a negotiated fee schedule to clients solely at our discretion, including fee structures based on combined assets of related clients. In these cases, clients will be notified in writing that they qualify for a lower fee tier. Clients using a lower fee tier will still follow the same calculation and fee assessment processes outlined above. The ongoing advised service reserves the right to provide periodic fee waivers when deemed appropriate.

For IIG Clients, fees will be allocated in accordance with the set Portfolio, unless otherwise defined under the plan rules. When we choose to withdraw the advisory fee from a Plan Account, we'll sell any securities held in an overweight sub-asset class unless the plan rules provide otherwise. We won't assess a fee on the balance of money market or stable value fund securities, nor on active loans. Where there is a transfer from one employer Plan Account to a new Plan Account with the same employer, the advisory fees that have accrued

since the last fee payment in the original Plan Account will be waived and new advisory fees will begin to accrue in the new Plan Account upon completion of the transfer.

There may be periods when rebalancing isn't needed because the Portfolio is appropriately allocated. The ongoing advised service will continue to monitor your Portfolio and goals to help keep you on track to meet your investment objectives and will therefore continue to charge all applicable fees during these times of inactivity.

Advisory fees for the ongoing advised service are in addition to the Vanguard Fund fees, account fees, non-Vanguard fund fees, and retirement plan fees described in the paragraphs below. You should review this information and carefully consider the effect of our advisory fees before you approve your financial plan or implement any recommendations provided through a financial plan or the ongoing advised service.

### **Vanguard Fund fees**

The advice provided by Vanguard Advisers, Inc. ("VAI"), will include recommendations to sell, hold, or purchase Vanguard Funds. Where we transact to implement your financial plan or you act in accordance with our advice and invest in Vanguard Funds, it'll result in the payment of fees to the Vanguard Funds and to The Vanguard Group, Inc. ("Vanguard"), an affiliate of VAI. A purchase or sale of Vanguard Fund shares isn't subject to a load, sales charge, or commission. However, each Vanguard Fund incurs advisory, administrative, and custodial fees, as well as other fees and expenses it pays out of its own assets. The advisory, administrative, custodial, and other costs make up the Vanguard Funds' expense ratios. Also, some Vanguard Funds impose purchase and redemption fees. Clients who invest in Vanguard Funds are subject to the applicable expense ratios and to any purchase and redemption fees. Please consult the prospectus for information about a specific Vanguard Fund's expense ratio and any fees assessed by that fund.

### **Account fees**

You may also incur account service fees, commission charges, and other account charges and processing fees in connection with establishing accounts with Vanguard Advisers, Inc. ("VAI") affiliates. You should review the terms of your account-opening documents or any plan fee disclosure notices for details about fees that may be assessed in connection with these accounts. Vanguard Marketing Corporation ("VMC"), doing business as Vanguard Brokerage Services® (VBS®), a registered broker-dealer and a wholly owned subsidiary of The Vanguard Group, Inc. ("Vanguard"), and an affiliate of VAI, offers commission-free transactions in Vanguard mutual funds and ETFs and commission-free online trading for most other ETFs, mutual funds, stocks, and options (a per-contract fee applies to options transactions) to clients who open Vanguard Brokerage Accounts. Clients with qualified assets above \$1 million also receive a limited number of commission-free transactions where such transactions normally carry a commission cost and are eligible for additional service level benefits. If you're an eligible RIG Client currently enrolled in one of these services, transactions performed by the ongoing

advised service will be eligible for the commission-free benefit, but any such executed transactions will reduce the number of commission-free transactions available to you in your self-directed accounts held outside of your Portfolio.

### **Non-Vanguard fund fees**

Mutual fund trades in a Vanguard Brokerage Account held through VMC are limited to those fund families with which VMC has entered into a selling agreement. VMC receives transaction fees, front- and back-end loads, sales charges, and 12b-1 fees in connection with certain transactions in third-party mutual funds through VMC's FundAccess® program. VMC will also receive fees for the provisioning of various shareholder services in connection with the participation of certain mutual funds in the FundAccess program. These may be considered revenue sharing and represent a significant source of revenue for VMC. Determined in accordance with an asset-based formula, these payments may equal up to 0.40% of a mutual fund's assets under management at VMC on an annual basis. VMC will also receive operational payments from mutual funds in the form of networking or per-position fees of up to \$20 for each customer position in a mutual fund on an annual basis. These fees are reimbursed to VMC for the work it performs on behalf of the funds, which may include, but isn't limited to, subaccounting services, dividend calculation and posting, accounting, reconciliation, client confirmation and statement preparation and mailing, and tax statement preparation and mailing. Certain funds offered through the FundAccess program assess purchase and redemption fees.

If the Portfolio transacts in a fund that assesses such fees or pays the aforementioned forms of compensation to VMC, those fees will be imposed on your transaction(s) and the compensation will be paid to VMC separate and apart from the advisory fees we assess.

### **Exchange-listed options**

VMC receives compensation for directing options order flow to specific market participants with which it has a relationship (Citadel Execution Services, Citigroup Global Markets, UBS Securities LLC, and KCG Americas LLC). VMC receives payments at an average blended rate below \$0.18 per contract. VMC doesn't receive payment for options orders routed to Pershing LLC. If a RIG Client transacts in options in their Portfolio, VMC will receive payment for order flow separate and apart from the advisory fees we assess.

### **Retirement plan fees**

IIG Clients may also directly or indirectly bear the fees assessed by The Vanguard Group, Inc. ("Vanguard"), for recordkeeping services provided by Vanguard to a retirement plan. In connection with its services, Vanguard receives fees separate from, and in addition to, any advisory fees assessed by Vanguard Advisers, Inc. ("VAI"). Thus, retirement plan participants who receive advice from VAI may directly or indirectly bear the fees assessed by Vanguard in connection with its services to the plan, in addition to any advisory fees assessed by VAI. IIG Clients may be permitted to invest in collective trusts, company stock funds, or certain customized

investment options for which Vanguard Fiduciary Trust Company, an affiliate of VAI, provides services and receives compensation. Because advice provided by VAI may include recommendations to hold or purchase these investment options, acting in accordance with such advice may result in the payment of fees to Vanguard Fiduciary Trust Company.

IIG Clients are often permitted to invest in non-Vanguard mutual funds. Because the advice provided by VAI may include recommendations to transact in non-Vanguard mutual funds, acting in accordance with such advice may result in payments to Vanguard or one of its affiliates or subsidiaries as compensation for participant-level recordkeeping and administrative services provided by Vanguard for such funds. This payment may be made by the fund company sponsoring the non-Vanguard mutual fund or an affiliate, by the plan sponsor, by the participants investing in the non-Vanguard mutual fund, or by some combination thereof.

### **Advisor compensation**

The advice provided by our advisors won't take into consideration whether Vanguard or any of its affiliates or subsidiaries will receive fees from its recommendation to purchase, hold, or sell Vanguard Funds or non-Vanguard investments. Advisory fees received by VAI don't vary on the basis of any investment options selected.

Certain VAI supervised persons are eligible to receive variable compensation based on discretionary and nondiscretionary factors, including the number of qualified clients who set up consultations and/or invest in Personal Advisor Services. This variable compensation structure creates a financial incentive for certain VAI supervised persons to recommend Personal Advisor Services over other advisory programs and brokerage services offered by Vanguard and its affiliates. Vanguard maintains and enforces policies reasonably designed to identify and disclose and minimize or eliminate these conflicts of interest. Neither the VAI supervised persons nor the advisors who deliver advice are compensated for or on the basis of any recommendation or sales of specific securities.

### **Performance-based fees and side-by-side management**

Vanguard Advisers, Inc., and its advisors don't receive any fees for advisory services provided to you based on a share of capital gains on or capital appreciation of your investments.

### **Types of clients**

Vanguard Personal Advisor Services is made available to RIG Clients and prospects with a minimum of \$50,000 of investable cash or securities in the Portfolio. Eligible account types for RIG Clients include individual accounts (including IRAs and Roth IRAs), joint accounts, and trust accounts. Other account types may be considered for purposes of goals forecasting, but Vanguard Advisers, Inc., won't invest or reallocate assets in those other accounts.

If you're an IIG Client and PAS has been made available by your Plan Sponsor, you may enroll your eligible U.S. tax-qualified retirement plans if:

- Your retail assets meet the \$50,000 minimum required and are currently being advised by PAS;
- Your investable cash or securities in your eligible Plan Account meets the \$250,000 minimum; or
- Your aggregated investable cash or securities in both an individual retail account and an eligible Plan Account meet the \$250,000 minimum.

For IIG Clients, eligible account types include 401(k)s and Roth 401(k)s.

Additionally, participants in Plans that offer self-directed brokerage options within the Plan will be ineligible to enroll in Personal Advisor Services. Other account types may be considered for purposes of goals forecasting, but we won't invest or reallocate assets in those other accounts.

Participants in eligible employer-sponsored retirement plans that aren't defined as IIG Clients are eligible to receive onetime advice and/or a point-in-time financial plan.

Clients of Vanguard Digital Advisor are not eligible to be enrolled in both programs simultaneously. If a client of Vanguard Digital Advisor chooses to move to Personal Advisor Services, an advisor can help them with enrollment. Additionally, participants with a 401(k) account actively enrolled in Vanguard Managed Account Program may not enroll the 401(k) account in Personal Advisor Services. Certain officers, directors, and substantial shareholders, including any employees subject to Rule 144 of the Securities

Act of 1933, as amended, or Section 16 of the Securities Exchange Act of 1934, as amended, or that are otherwise identified as company insiders, are not eligible for Personal Advisor Services (including both participant account and Vanguard Brokerage Accounts).

Clients are generally required to maintain permanent residence in one of the 50 states, the District of Columbia, or the U.S. Virgin Islands. Clients that are temporarily abroad, such as those in the military or on government duty, may be eligible under consideration of additional information.

### **Methods of analysis, investment strategies, and risk of loss**

Vanguard Advisers, Inc.'s ("VAI"), investment methodology incorporates our investment philosophies and beliefs, such as the benefits of low costs, diversification, and indexing. Our methodology, which is approved and periodically reviewed by senior Vanguard management, is based on Vanguard's fundamental research, as well as research obtained from a wide variety of external sources, public and private. Our methodology is driven by long-term financial goals, not by market-timing or short-term investment performance. Rather than attempting to predict which investments will provide superior performance at any given time, VAI believes it can provide the best opportunity for success by maintaining a broadly diversified financial plan or Portfolio—including

investments from a variety of market sectors and asset classes. If, as a result of its periodic review, VAI makes material changes to our methodology that affect your financial plan, you'll be informed of the changes and then given the opportunity to approve them.

### **Investment strategy for the Portfolio**

VAI's investment strategies are designed with a disciplined, long-term approach focused on managing risk through appropriate asset allocation and diversification. Our methodology uses a strategic approach by first focusing on the mix of asset classes (i.e., stocks, bonds, and cash) that align with your willingness and ability to take risk and are appropriate to meet your financial goals over time. The methodology is designed to then recommend specific investments for your financial plan or Portfolio.

We rely on information you provide and on certain assumptions based on our analysis about future financial factors, such as rates of return on certain types of investments, inflation rates, client rate of savings, percentage of income needed in retirement, portfolio withdrawals, tax rates, taxable capital gains and losses, college costs, and market returns, to develop an investment strategy for you. All assumptions are estimates based on historical data and proprietary forecasts that, in our opinion, serve as a useful and reasonable foundation on which to develop financial strategies.

### **Developing an asset allocation**

First, we'll gather information through the use of a risk quiz or risk questionnaire, an investor profile, and consultation with an advisor (unless you choose to forego scheduling an advisor consultation) to understand your financial objectives, such as your age, risk tolerance, specific financial goals, investment time horizon, current investments, tax status, other assets and sources of income, investment preferences, and planned spending from the Portfolio or accounts covered by the financial plan. A proprietary algorithm uses this data to recommend a particular investing track and corresponding glide path that embodies the risk tolerance, asset allocation, and time horizon suitable for your goals. The investing tracks range from very conservative, conservative, moderate, aggressive, and very aggressive, and the glide paths within each track are designed to change over time to adjust your risk exposure and asset allocation to match the time remaining for each of your specified goals. You have the option to discuss your investing track and glide path with an advisor at any time, and the advisor will have the ability to adjust your investing track to more conservative or aggressive if you both deem such change to be appropriate. Your investment strategy may include separate asset allocation strategies tailored to each of your financial goals. If you use multiple accounts to support a goal, the asset mix of any single account may vary, but collectively the accounts will achieve the target asset allocation for the goal. We'll rely on the information you provide to formulate the financial plan for the Portfolio. Inaccuracies in the information you provide us could affect our recommendations, your financial plan, and/or your Portfolio.

When recommending, setting, and adjusting your asset allocation, we weigh “shortfall risk”—the possibility that a financial plan or Portfolio will fail to meet longer-term financial goals—against “market risk,” or the chance that a financial plan or Portfolio’s value will fluctuate based on the market’s ups and downs. An investment strategy that’s too conservative raises the risk that inflation will erode the purchasing power of a long-term portfolio. Appropriate asset allocations may range from 100% stock to 100% short-term reserves based on the risk tolerance and remaining investment time horizon for a particular financial goal. Investment strategies for different goals may reflect different trade-offs between shortfall and market risk. Note that IIG Client Portfolio recommendations will be limited to those investment types and securities that have been selected by the plan sponsor as the fiduciary of the plan.

#### **Diversifying the Portfolio asset allocation across a variety of sub-asset classes**

We seek to provide adequate diversification within each asset class. We recommend investing across different market segments to ensure sub-asset class diversification. For IIG Clients, where your plan fiduciary does not make globally diversified products available, we may use U.S. products to meet the allocation exposure. We’ll establish allowable sub-asset class ranges. The ongoing advised service will adjust your Portfolio to position sub-asset classes within our allowable ranges. We may propose the addition, removal, or adjustment of sub-asset class exposures based on continuing portfolio construction research performed by Vanguard Investment Strategy Group or based on changes to your financial situation or investment objectives.

Our equity methodology seeks to diversify across different market segments (e.g., domestic and international; large-, mid-, and small-capitalization; and growth and value). While investing in equity securities can help grow your wealth over the long term, stock markets are also volatile and you may lose money in a sharp downturn that can occur without warning. The financial plan and the Portfolio will generally diversify the domestic and international stock positions across market capitalizations within those segments in similar proportion to their long-term market weight. In addition, we seek to balance growth and value investment styles when constructing a Portfolio. We examine the industry segments represented in the Portfolio to ensure the Portfolio isn’t too heavily concentrated in one or more industry sectors, countries, or market segments. Read the “Investment risks” section of this brochure below for further discussion of risks.

Our bond methodology emphasizes broad diversification across the bond market, both domestic and international, and maintains an interest rate risk exposure in line with the broad bond market. Investments in bonds are subject to multiple risks, including interest rate, credit, and inflation risk. Diversification across the domestic and global bond markets, as well as across market segments, issuers, and the yield curve, helps mitigate these risks. Our lead bond recommendation builds diversified financial plans and Portfolios across short-, intermediate-, and long-maturity bond funds and seeks to maintain an intermediate-term

duration. An intermediate-term duration generally means your financial plan or Portfolio stays in the middle of the spectrum when measuring its sensitivity to interest rate changes while maintaining exposure to all areas of the maturity range. We also recommend a broad exposure to investment-grade bond funds (both corporate and Treasury bonds). We’ll seek to build a high-credit-quality financial plan or Portfolio of bond funds, including funds that hold corporate, Treasury, agency, and mortgage-backed bonds. Depending on your tax bracket, we may recommend tax-exempt bond funds for your taxable account(s). Bond portfolios may incorporate a mix of domestic and foreign bond funds. As with equities, we examine bond sector exposure to ensure a financial plan or Portfolio isn’t concentrated in a single segment, which could expose the financial plan or Portfolio to a higher level of risk. Read the “Securities recommendations and risk,” “Risks associated with algorithm usage,” and “Investment risks” sections of this brochure below for further discussion of risks.

#### **Diverse investments, primarily consisting of low-cost Vanguard Funds**

After determining the overall asset mix and your stock and bond sub-allocations, our algorithm will then recommend appropriate investments for your financial plan or Portfolio. We approach fund selection with a long-term, buy-and-hold approach and discourage switching strategies based solely on recent performance. However, we may recommend reallocating holdings among different Vanguard Funds as we periodically reassess the most appropriate investments to achieve the targeted asset allocation and sub-allocations.

#### **Considering tax efficiency in allocating assets across multiple Portfolio accounts**

For RIG Client Portfolios containing both taxable and tax-advantaged accounts, the financial plan will aim to optimize the tax efficiency of the Portfolio by recommending or allocating investments strategically among taxable and tax-advantaged accounts. The objective of this “asset location” approach is to hold relatively tax-efficient investments, such as broad-market stock index products, in taxable accounts while keeping relatively tax-inefficient investments, such as taxable bonds, in tax-advantaged accounts. This tax-efficient asset location methodology is demonstrated through a tiered approach. First, the ongoing advised service will attempt to construct your Portfolio to fulfill your fixed income allocation in tax-advantaged accounts, unless you already hold individual bond positions that align with our portfolio construction methodology but are held in the wrong asset location. If it becomes necessary to hold bonds in a taxable account, tax-exempt municipal bond funds may be used. Second, the ongoing advised service will recommend holding any active equity funds in your Portfolio in your tax-advantaged accounts, subject to remaining capacity after your Portfolio’s target bond allocation has been fulfilled in those accounts. We’ll modify our approach to tax-efficient investing based on continuing portfolio construction research performed by Vanguard Investment Strategy Group or changes in tax laws.

### Reasonable restrictions

When requesting a financial plan, you'll have the ability to impose reasonable restrictions on the investments recommended for the financial plan or Portfolio. Specifically, you can request that certain alternate Vanguard Funds and certain non-Vanguard securities be held as part of the financial plan or in the Portfolio, provided those securities meet certain standards imposed by VAI, including our portfolio construction and diversification standards established by us for such holdings. You will also have the ability to designate certain securities that shouldn't be recommended for the financial plan or Portfolio or that shouldn't be sold if held in the Portfolio.

RIG Clients can consult with an advisor to discuss certain investing preferences they may have. For example, an active versus passive tilt, or limits on certain sub-asset allocation percentages, among other preferences. Specifically, RIG Clients can request:

- A variance in the percentages of your equity allocation invested in domestic versus international funds (subject to our allowable variance ranges).
- A variance in the percentages of your international equity allocation invested in developed versus emerging markets (subject to our allowable variance ranges).
- A variance in the percentages of your bond allocation invested in domestic versus international funds (subject to our allowable variance ranges).
- An active domestic bond allocation instead of an indexed approach (subject to available shelf space in tax-advantaged accounts, such as IRAs).
- A variance in the domestic bond sub-asset allocation to accommodate a greater percentage investment in corporate bond funds (subject to available shelf space in tax-advantaged accounts, such as IRAs).

IIG Clients may request that we retain any company stock they previously purchased in their Plan Account, subject to our allowable concentration limits for company stock. Note that IIG Clients holding company stock in their Plan Account will be limited to 10% of their equity allocation being held in the company stock. IIG Clients can consult with an advisor to discuss certain investing preferences they may have. Subject to any plan lineup limitations, IIG Clients can also request:

- A variance in the percentages of equity allocation invested in domestic versus international funds (subject to our allowable variance ranges).
- A variance in the percentages of international equity allocation invested in developed versus emerging markets (subject to our allowable variance ranges).
- A variance in the percentages of bond allocation invested in domestic versus international funds (subject to our allowable variance ranges).
- An active domestic bond allocation instead of an indexed approach (subject to available shelf space in tax-advantaged accounts, such as IRAs).

If you request reasonable restrictions in the financial plan or the Portfolio, we'll analyze whether the requested securities fit into the overall stock or bond allocations recommended for the financial plan or the Portfolio. When analyzing securities, we'll rely on Vanguard's asset classification assessments based on information received from third-party data providers to categorize these investments.

Any restriction you want to impose is subject to our review and approval. Restrictions will be allowed as long as they aren't inconsistent with our methodology and are permissible under your plan rules. The financial plan or Portfolio will remain diversified by asset class and within each asset class to ensure no single security or class of securities will impose an unreasonable level of risk. We won't be responsible, however, for performing due diligence on any non-Vanguard security included in your financial plan or Portfolio as a result of a requested restriction. If your desired restrictions are unreasonable or if we believe the restrictions are inappropriate for you, we'll notify you that, unless the instructions are modified, we'll remove particular securities from the financial plan or the Portfolio, remove particular accounts from the Portfolio of the ongoing advised service, or terminate the ongoing advised service.

Certain investments you may request, such as individual stocks and bonds, stock sector funds, and other Vanguard or non-Vanguard funds, may not offer the same degree of diversification, liquidity, or performance consistency available with the Vanguard Funds we normally recommend.

### Adjusting the Portfolio asset allocation

This section about adjustments to the Portfolio asset allocation applies to those clients who have enrolled in the ongoing advised service. Each quarter (with timing determined by your contract anniversary date, or otherwise agreed upon with an advisor), the ongoing advised service will review your target allocation as illustrated in the asset allocation schedule found in your financial plan in relation to your investment time horizon to determine if any changes in the target asset allocation you approved as part of your ongoing financial plan are recommended. If the ongoing advised service recommends changes to the Portfolio's target allocation, we may also make recommendations with respect to the purchase or sale of securities in the Portfolio to meet the new target asset allocation and reflect your progress along the asset allocation schedule.

If your ability to bear risk, your investment time horizon, your financial situation, or your overall investment objectives change, you should notify an advisor or update your information so the ongoing advised service can take these considerations into account when reviewing your asset allocation target. We won't change the recommended asset allocation based on current or prevailing market conditions but may recommend a different asset allocation based on changes to your financial situation or investment objectives. If we recommend a different asset allocation, you'll receive a new financial plan for your review and approval.

This section about adjustments to the Portfolio asset allocation doesn't apply to participants of employer-sponsored retirement plans or those clients who only receive a financial plan and decide not to enroll in the ongoing advised service.

### Goals forecasting

We'll also provide projections to help you assess your ability to achieve your personalized financial goals. To cover a broad range of outcomes, our forecasts will generate 10,000 scenarios to measure your likelihood of success of reaching your goals. The projections use forecasted index returns for equities, bonds, and cash, which are used to represent the hypothetical returns of the asset classes in your financial plan or Portfolio. These forecasted index returns as well as inflation rates are provided through the Vanguard Capital Markets Model® ("VCMM"), developed by Vanguard Investment Strategy Group, which is discussed in more detail later.

Projections may be based on accounts included within the financial plan or Portfolio or on accounts held outside of the financial plan or Portfolio. Our goals-forecasting model uses the same index returns to represent the returns of the asset classes in all of your accounts supporting your goals in your financial plan or Portfolio. Index returns for fixed income and equity products are reduced by 0.50% annually, and index returns for money market/cash/short-term reserves are reduced by 0.30% annually to account for hypothetical expenses and advisory fees. Inflation is modeled based on historical data from 1960 through the most recent year-end and simulated going forward.

The likelihood-of-success projections forecast for your goals don't attempt to predict or portray the future performance of any securities held in accounts supporting your goals. The forecasts are hypothetical projections based on statistical modeling of current and historical data. They aren't a guarantee of future results or a guarantee of the success rate of the simulated outcomes. Although we believe the forecasts may reasonably project your likelihood of reaching your goals as supported by accounts invested in a diversified portfolio of Vanguard Funds, such projections may not correlate well to other assets you hold in any accounts that are not invested in accordance with our lead advice methodology. Accordingly, your actual investment results may vary significantly from our projections.

### Outside accounts and cost assumptions used in goals forecasting

For any accounts held outside of the financial plan or Portfolio, we'll assume the asset allocation held in those outside accounts is the same as in the accounts held within the financial plan or Portfolio. Accordingly, we'll use the same index returns noted in the section above titled "Goals forecasting" for the forecasting model to project your likelihood of success based on both outside accounts and accounts held in the financial plan or Portfolio. If your outside accounts aren't invested in a similar manner as the accounts in your financial plan or Portfolio, your actual investment results may vary significantly from our likelihood-of-success projections. A variance in the actual asset allocation of your accounts held outside of the financial plan or Portfolio could

significantly affect your likelihood of reaching a goal within the indicated time frame.

Any forecasted goals using accounts held outside of the financial plan or Portfolio (including other Vanguard accounts) are calculated based solely on the information you provide us with respect to the dollar amount of securities held in those accounts and your rate of contributions to those accounts. You may provide us with such information manually or through the usage of certain third-party financial data aggregation services. We'll continue to rely on the information you provide for as long as your goals are supported by such accounts. We won't independently verify or update this information. You can update the dollar amount of securities in accounts held outside of the financial plan or Portfolio and your rate of contributions by contacting us or by authorizing a third-party financial data aggregation service to refresh the data.

### Index benchmarks used in the calculations

The returns used in the likelihood-of-success calculations contained in your financial plan for each type of goal are based on the following:

- We use historical index data for U.S. bond market returns to forecast your bond allocation when calculating your likelihood of success. For U.S. bond market returns, we use the Standard & Poor's High Grade Corporate Index from 1960 through 1968; the Citigroup High Grade Index from 1969 through 1972; the Lehman Brothers U.S. Long Credit AA Index from 1973 through 1975; and the Bloomberg Barclays U.S. Aggregate Bond Index thereafter.
- We use historical data for U.S. short-term reserve returns to forecast your short-term reserves allocation when calculating your likelihood of success. We calculate U.S. short-term reserves returns on the basis of 3-month constant-maturity yields dating back to 1960, also provided in the Federal Reserve's Statistical Release H.15.
- We use historical index data for U.S. stock market returns to forecast your equity allocation when calculating your likelihood of success. For U.S. stock market returns, we use the S&P 90 Index from 1926 through March 3, 1957; the S&P 500 Index from March 4, 1957, through 1974; the Wilshire 5000 Index from 1975 through April 22, 2005; and the MSCI US Broad Market Index thereafter.
- We use historical index data for international stock market returns to forecast your equity allocation when calculating your likelihood of success. For international stock market returns, we use the MSCI EAFE Index from 1970 through 1988 and a blend of 75% MSCI EAFE Index/25% MSCI Emerging Markets Index thereafter.

While we may recommend that you invest a portion of your equity and bond allocations in securities with international exposure, we do not use historical index data for international bond market returns when calculating your likelihood of success because of the lack of long-term international benchmark data. Additionally, the historical index data we use for the stock and bond markets may not correlate well to other assets you hold in accounts held outside of the financial plan or Portfolio or in Portfolio accounts invested in securities other than Vanguard's registered index funds.

## Retirement goals forecasting

We project your lifetime cash flows—inflows from investment income and other sources and outflows from spending—to assess whether your investments can adequately support your retirement income needs over your lifetime. We evaluate many factors in assessing your current and future cash flows, including:

- Projected and known expenses, including annual living expenses and other periodic expenses you identify.
- The effect of adjusting your annual living expenses based on inflation or our Dynamic Spending model (discussed below).
- Projected income, including employment, Social Security, pension, and income from investments.
- The effect of variables, such as inflation and income taxes.
- The effect of different market scenarios on the rates of return used to project the likelihood of success of reaching your retirement goal.

It's important that the accounts supporting your retirement goal be able to endure a variety of market conditions. To assess your ability to meet your expenses throughout retirement and through variable market conditions, our cash flow analysis shows how your accounts supporting this goal would perform under various hypothetical scenarios.

There are certain variables we're unable to take into account in the cash flow analysis, including some retirement plan design considerations, such as a plan's implementation of the 401(a)(17) limit, payroll deferral limits, and certain nonelective employer contributions.

We simulate your expected inflows and outflows each year through your expected planning horizon and, using each individual scenario's unique forecasted return and inflation assumptions, we project your likelihood of reaching your retirement goal.

As part of your outflows, your annual expenses are projected each year using either a "dollar plus inflation" approach or our Dynamic Spending model. "Dollar plus inflation" means that each year we'll take your projected annual expenses in dollars and adjust that value to account for expected inflation in each year. Dynamic Spending considers hypothetical fluctuations in the three-year annualized balance of the accounts supporting your retirement goal and is bound by annual increase and decrease thresholds you establish with an advisor. Dynamic Spending is one factor in determining your forecast and doesn't cause an advisor to take any action in your Portfolio. If you elect to use Dynamic Spending, we assume you'll adjust your spending to match the new annual living expense allowance you'll be provided with at the beginning of each year.

The overall likelihood-of-success measure for your retirement goal represents the percentage of the 10,000 hypothetical scenarios in which the balance in your retirement accounts is at least \$1 at the end of your planning horizon, which is usually set to age 100 as our default.

## Goals forecasting for accumulator goals

An accumulator goal is one in which you're currently saving for a future event. Accumulator goals can focus on saving for a single lump-sum distribution (such as saving for a home) or on saving a sum to draw down over an extended period (such as saving for retirement). We'll illustrate the process using an accumulator goal with an extended drawdown.

The first step involves estimating the amount of assets you'll need to accumulate at the beginning of the spending phase. To do so, you'll need to inform us of the annual amount you expect to spend, the year in which you expect spending to begin, the number of years during which you expect to spend, and any sources of income you have during the spending phase. After adjusting for inflation, we'll arrive at the estimated sum needed at the beginning of the spending phase by running the VCMM Monte Carlo simulations using the underlying asset allocation assumption for the goal. Read the section below titled "Vanguard Capital Markets Model" for more information about the Monte Carlo simulations. The calculations will be performed with the aim of estimating a sum that will allow you to meet your spending needs in 85% of the Monte Carlo simulations (meaning we estimate that, in 85% of the hypothetical scenarios projected, you'll have at least \$1 left at the end of the spending phase).

The second step involves determining whether you're on track in the accumulation phase to meet your overall goal of arriving at the sum needed at the outset of the drawdown phase. To model the accumulation phase, you must provide us with the current amount of assets you have in support of the goal and the amount you intend to save annually until the start of the drawdown phase. Using the underlying asset allocation for the goal, we'll run the VCMM Monte Carlo simulations and calculate what percentage of scenarios had an ending balance, without considering any taxes, greater than or equal to your target amount at the outset of the spending phase. We'll quantify the ability to meet a goal using a success rate. A successful outcome is defined as one in which the projected ending account balance, without considering any taxes, either meets or exceeds the Target Balance by the target goal year. For example, if a goal has a success rate of 80%, then 80% of the simulations resulted in a projected ending balance that met or exceeded the target goal amount.

Clients who joined the service before October 2020 as accumulators with a retirement goal have experienced retirement goal forecasting in a two-step process similar to the example provided above. Throughout 2020 and 2021, these clients will be converted to the forecasting model described in the previous section titled "Retirement goals forecasting." After conversion, we'll assess whether the savings and income of clients in the retirement goal accumulation stage will enable them to meet their future expenses throughout retirement by projecting lifetime cash flows. All impacted clients will have an opportunity to speak with an advisor as part of the conversion process if they have questions about the model's assumptions or if they'd like to adjust any assumptions for a more personalized approach.



Clients with nonretirement accumulator goals, such as college, saving for a home, or establishing a rainy day fund, will continue under the current accumulator goals forecasting.

### Trust goals forecasting

For RIG Clients, we can provide investment recommendations and advised account services for certain trust accounts. We'll collect information concerning current and future income and distributions from the trust. We consider future inflows and distributions throughout the projected duration of the trust planning horizon. We'll assess cash flows—inflows from investment income and other sources and outflows from distributions—to assess whether the trust investments can adequately support the trust needs over the intended duration.

We evaluate many factors to assess the trust's current cash flow and to create future cash flow projections, including:

- Projected and known distributions from the trust, as a percentage of the income of a Portfolio, or a fixed dollar amount, as provided by the trustee(s).
- Projected inflows to the trust from investment and noninvestment income sources, identified by the trustee(s).
- The effect of variables, such as inflation and income taxes. The trust cash flow model will factor in trust-specific income tax considerations.
- The effect of different market scenarios on the rates of return of trust assets.

The validity of these assumptions is based exclusively on the information the trustee(s) has provided.

It's important the accounts supporting the trust's goal can endure a variety of market conditions. To assess the ability of the trust to meet future distribution goals through a variety of market conditions, our cash flow analysis projects how the trust assets would perform under various hypothetical scenarios.

We simulate the trust's expected inflows and outflows each year through its expected planning horizon, and using each individual scenario's unique forecasted return and inflation assumptions, we project the trust Portfolio's ending balance. The trust's estimated success rate is simply the percentage of these scenarios in which the trust balance is at least \$1 at the end of its planning horizon.

### Vanguard Capital Markets Model ("VCMM")

VCMM is a proprietary, state-of-the-art financial simulation tool developed and maintained by Vanguard Investment Strategy Group. The VCMM uses a statistical analysis of historical data for interest rates, inflation, and other risk factors for global equities, fixed income, and commodity markets to generate forward-looking distributions of expected long-term returns. The asset return distributions used in the goals-forecasting models are drawn from 10,000 VCMM simulations based on market data from 1926 for the equity markets and from 1960 for the fixed income markets through the most recent year-end. The VCMM forecasts are updated annually to incorporate the most recent market data, though we may update the data more frequently in cases of major market events.

The VCMM is grounded on the empirical view that the returns of various asset classes reflect the compensation investors receive for bearing different types of systematic risk, a measure of the volatility of a security or a portfolio relative to a benchmark, also known as beta. Using a long span of historical monthly data, the VCMM estimates a dynamic statistical relationship among global risk factors and asset returns. Based on these calculations, the model uses regression-based Monte Carlo simulation methods to project relationships in the future. A regression-based Monte Carlo framework incorporates the uncertainty of any asset class produced by basic Monte Carlo simulation and also captures the dynamic relationships among certain assets and risk factors. By incorporating a variety of macroeconomic and financial risk factors into the return-generating process, a regression-based Monte Carlo framework generates financial simulations that are responsive to changes in the economy. By explicitly accounting for important initial market conditions when generating its return distributions, the VCMM framework departs fundamentally from more basic Monte Carlo simulation techniques.

### Limitations of the quantitative analysis

Projections generated by the VCMM are based both on estimated historical relationships and on assumptions about the risk characteristics of various asset classes. As a result, the accuracy of VCMM forecasts depends on the relevance of the historical sample in simulating future events. The projections are hypothetical in nature, don't reflect actual investment results, and aren't guarantees of future results.

### Disciplinary information

VAI has no material legal or disciplinary information to disclose.

### Other financial industry activities and affiliations

#### The Vanguard Group, Inc.

Vanguard Advisers, Inc. ("VAI"), is 100% owned by Goliath, Inc., a Delaware corporation, which is wholly owned by The Vanguard Group, Inc. ("Vanguard"). Vanguard, also a registered investment advisor, provides a range of investment advisory and administrative services to the Vanguard Funds.

When giving advice to clients, we'll recommend the purchase of Vanguard Funds serviced by our corporate parent, Vanguard. We address the competing interests that arise between us and our clients as a result of recommending proprietary funds by relying on our time-tested investment philosophies and beliefs, such as the benefits of low costs, diversification, and indexing, when formulating target allocations for clients. We disclose to prospective clients that we recommend Vanguard Funds prior to, or at the establishment of, the advisory relationship. Acting in accordance with our advice to purchase Vanguard's proprietary funds will result in the payment of fees to the Vanguard Funds that are separate from, and in addition to, any advisory fees assessed by us.

In the case of Vanguard Funds being recommended in Plan Accounts, the plan fiduciary has selected the Vanguard Funds to be made available in the plan lineup.

### **Vanguard Marketing Corporation**

Shares of the Vanguard Funds are marketed and distributed by Vanguard Marketing Corporation (“VMC”). VMC’s marketing and distribution services are conducted in accordance with the terms and conditions of a 1981 exemptive order from the SEC, which permits Vanguard Funds to internalize and jointly finance such activities. Each Vanguard Fund (other than a fund of funds) or each share class of a fund (in the case of a fund with multiple share classes) pays its allocated share of VMC’s marketing costs. VMC doesn’t receive transaction-based compensation in connection with the distribution of the Vanguard Funds.

When giving advice to clients, we’ll recommend the purchase of Vanguard Funds distributed by our affiliate, VMC. Since VMC doesn’t receive transaction-based compensation in connection with the distribution of the Vanguard Funds, the competing interests that arise from our affiliation with VMC in its role as distributor of the Vanguard Funds and ETFs are mitigated. However, to the extent that you maintain a brokerage account with VMC as part of the Portfolio, VMC may receive compensation from you that’s separate from, and in addition to, the advisory fees payable to us. Read the section titled “Brokerage practices” for more information about brokerage charges and other fees and expenses you may pay as a result of enrolling your Vanguard Brokerage Account in our service. Certain members of our management and our advisors are registered representatives of, or are affiliated with, VMC. Please refer to the Supplement to the Vanguard Personal Advisor Services Brochure for further information.

### **Vanguard Fiduciary Trust Company**

We’re also affiliated with Vanguard Fiduciary Trust Company (“VFTC”), a limited-purpose trust company incorporated under the banking laws of the Commonwealth of Pennsylvania and a wholly owned subsidiary of Vanguard. VFTC serves as trustee and investment advisor for certain collective investment trusts offered by Vanguard as eligible investment options by some retirement plans. We may recommend the purchase of Vanguard collective investment trusts serviced by VFTC. Additionally, VFTC serves as directed trustee for certain employer-sponsored retirement plans covering participants. VFTC also serves as custodian for traditional IRAs, SEP-IRAs, and Roth IRAs (collectively referred to as “Vanguard IRAs”). VFTC may charge reasonable custodial fees with respect to the establishment and maintenance of your Vanguard IRAs at any time during the calendar year. You should consult the Disclosure Statement and Custodial Account Agreement governing your Vanguard IRAs, or your Annual Plan Fee Disclosure Notice, for more information about VFTC’s fees and services provided.

### **Vanguard National Trust Company**

Vanguard National Trust Company (“VNTC”) is a federally chartered, limited-purpose trust company regulated by the

Office of the Comptroller of the Currency, which provides corporate trustee services and investment advisory services to its high-net-worth client base. VNTC’s investment advisory services use the Vanguard Personal Advisor Services brand but are provided separately from VAI’s Personal Advisor Services. VNTC was chartered in 2001, but its business has been in operation since 1996. VNTC is a wholly owned subsidiary of Vanguard.

### **Code of ethics, participation or interest in client transactions, and personal trading**

VAI operates under a code of ethics that complies with Rule 17j-1 of the Investment Company Act of 1940 and Rule 204A-1 of the Investment Advisers Act of 1940.

The code sets forth fiduciary standards that apply to all employees, incorporates Vanguard’s insider trading policy, and governs outside employment and receipt of gifts. Additionally, the code imposes restrictions on the personal securities trading of Vanguard employees, as well as reporting requirements. The trading restrictions and reporting requirements are more involved for employees with access to information about Vanguard Fund trading activity or Vanguard client trading activity and are designed to ensure Vanguard employees don’t misuse fund or client information for their own benefit.

Vanguard will provide a copy of its code of ethics to any client or prospective client upon request at no charge.

Read the previous section titled “Other financial industry activities and affiliations” for a discussion of VAI’s affiliations with other Vanguard entities and how those affiliations may affect VAI clients.

### **Brokerage practices**

This section about brokerage practices applies only to RIG Clients. If you transact in Vanguard ETFs® or non-Vanguard securities in the Portfolio, you’ll be required to establish or use an existing brokerage account held through our affiliated broker-dealer, VMC, for those securities, and you’ll agree in Your Service Agreement for Vanguard Personal Advisor Services to execute all Portfolio brokerage transactions through VMC. Transactions executed in a Vanguard Brokerage Account will be subject to VMC’s usual and customary fees, markups, commissions, and charges, as well as bid-ask spreads, separate and apart from the advisory fees we assess. For manually processed brokerage trading, it’s our practice to transmit orders to the secondary markets during normal market hours on any business day that the markets are open for trading.

For automated brokerage trading, we typically transmit orders to the secondary markets beginning at or near 10 a.m., Eastern time, through the close of trading on any business day the markets are open for trading. To limit the adverse price effects you could experience if we submitted our automated brokerage trades in bulk to the secondary markets at a single point in time, we’ve designed a fair and equitable system for handling automated brokerage trades that doesn’t systematically

disadvantage any client. Automated trades we generate between the hours of 3:45 p.m., Eastern time, on a business day through 10 a.m., Eastern time, on the next business day are sent out to the secondary markets in timed batches during that second business day. When automated trades recommend the purchase or sale of Vanguard ETFs on behalf of VAI's advised clients, those trades may be aggregated along with trades recommended for clients of VNTC, an affiliate of VAI. This means the individual Vanguard ETF® trades of certain VAI and VNTC clients may be combined for execution in the secondary market. We aggregate trades in Vanguard ETFs, where possible, for the purpose of minimizing transaction costs while seeking to obtain best execution on behalf of our clients. Where we aggregate trades, we first seek to reduce transaction costs by employing cross trading among the advised accounts of VAI and VNTC clients who are buying or selling a particular Vanguard ETF capable of being cross traded on that business day. To do so, we determine the net amount of our clients' buys and sells that can be aggregated for a particular Vanguard ETF on that business day and match up the trades of as many of those buyers and sellers as possible on a pro rata basis across all the clients participating in the aggregate trade. With this practice, individual advised clients are selling their Vanguard ETFs to other advised clients and thereby avoiding having those trades sent to the secondary markets for execution. We'll price all crossed trades at the then prevailing market price as determined by the midpoint between the national best bid and offer. Any portion of the aggregate trade unable to be executed through cross trading will be submitted as a residual aggregate trade to the secondary markets in an attempt to complete any unfilled orders for that Vanguard ETF. We'll calculate an average price for all of the Vanguard ETFs bought or sold together, and clients who participated in the aggregated trade will receive that average price for the Vanguard ETFs traded for them. The average price we assign to individual trades may be greater or less than the price an individual client's order would've received if not traded using aggregation and cross trading. Further, if we're unable to completely fill the residual aggregate trade, we'll distribute the Vanguard ETFs purchased or the proceeds received from such aggregate transaction to the clients who participated in the residual aggregate trade on a pro rata basis. We'll initiate or pause automated trading at our discretion at any time and for any reason, including pausing trading when we believe that continuing trading may pose undue risk of harm to your Portfolio.

Aggregation and cross trading are not available to all account types, security types, or order types. You'll only be able to participate in aggregation and cross trading in certain automated trades of Vanguard ETFs submitted on your behalf from your Vanguard Brokerage Account. Accounts that are governed by ERISA aren't permitted to engage in cross trading. Additionally, you won't participate in aggregation and cross trading where:

- Trades are submitted manually instead of using our automated brokerage trading systems.
- Automated Vanguard ETF trades are submitted for an individual advised client along with an order to transact in securities that are ineligible for aggregation and cross

trading, such as the sale of an individual bond.

- Automated Vanguard ETF trades are submitted for an individual advised client along with an order to transact in securities held in a legacy transfer agent account or legacy VBS account.

Clients who don't participate in aggregation and cross trading might receive a different, possibly worse, price for the securities bought and sold on their behalf.

Where VAI is selling your entire position in stocks or ETFs and the position includes fractional shares, the fractional shares liquidate automatically on the settlement date at no additional cost to you. VMC will purchase the fractional shares from you on a principal basis at the same price at which the whole shares executed.

Periodically, we conduct due diligence to review the execution quality of any transaction services VMC provides for clients' Portfolios, primarily to oversee VMC's compliance with its best execution practices. VMC routes equity and options orders to various markets. VMC uses a top-down approach to select market participants with which VMC will establish a relationship. This approach includes a review of system availability and service quality, as well as financial and regulatory standing. The designated market participants to which orders are routed are selected based on the consistently high quality of their executions in one or more market segments. In analyzing quality of executions, VMC considers factors such as liquidity enhancement, price improvement, execution speed, and overall effective price compared with the national best bid or offer ("NBBO"). VMC regularly conducts analysis and reviews reports to evaluate execution quality.

Other investment advisors may not require you to direct brokerage transactions through a specified broker-dealer. By directing brokerage transactions to VMC, we may be unable to achieve most favorable execution of your transactions, and this practice may cost you more money.

### **Review of accounts**

This section about the review of accounts applies to those clients who have enrolled in the ongoing advised service. Clients of the ongoing advised service will have continuous access to their Portfolio information through our online web experience. We'll periodically evaluate and monitor the Portfolio through investment reviews and analyses. Each quarter, with timing determined by your contract anniversary date, or otherwise agreed upon with an advisor, we'll check your Portfolio to make sure it's in line with your target allocation.

We don't perform ongoing account monitoring or offer account reviews for clients who only receive a financial plan and do not to enroll in the ongoing advised service.

### **Adjusting the asset allocation**

This section about adjustments to your asset allocation applies to those clients who have enrolled in the ongoing advised service. We may recommend adjusting your asset allocation as your ability to bear risk changes or to account for changes

to your investment time horizon, but we won't change the asset allocation based on market conditions. Quarterly, we'll review your target allocation in relation to your investment time horizon to determine if changes to the allocation are necessary. The Portfolio's target allocation may also change based on changes to your financial situation and investment objectives. Changes in your asset allocation may cause us to recommend and effect the purchase or sale of securities in your Portfolio to meet the new target asset allocation.

We don't monitor for adjustments to the asset allocation of clients who only receive a financial plan and do not enroll in the ongoing advised service.

### **Rebalancing the Portfolio**

This section about periodic rebalancing applies to those clients who have enrolled in the ongoing advised service. If during a quarterly review your Portfolio is found to deviate from the target asset allocation by more than 5% in any asset class, we'll initiate steps to begin rebalancing your Portfolio within the five-day review period using investment methodologies and strategies consistent with those employed during your Portfolio's implementation. Securities contributing to overweighted sub-asset classes will be sold and the proceeds invested in underweighted sub-asset classes in accordance with your financial plan.

We'll attempt to minimize the tax costs associated with rebalancing your Portfolio. If the Portfolio consists of both taxable and tax-advantaged registrations, we'll first attempt to rebalance within the tax-advantaged accounts to attempt to limit tax costs. In addition, we'll follow a tax-efficient "asset location" strategy to consider the tax implications of repositioning investments within the taxable accounts and among the taxable and tax-advantaged accounts. This strategy will follow similar practices as those used during implementation of your Portfolio to hold relatively tax-efficient investments, such as broad-market stock index products, in taxable accounts while keeping relatively tax-inefficient investments, such as taxable bonds, in tax-advantaged accounts. If your Portfolio deviates from the target asset allocation by 5% or less in all asset classes, individual investments may still be reviewed and sold, unless a client-directed hold exists. Additionally, we'll use cash flows as an opportunity to adjust your holdings to your target allocation. That is, we'll invest your contributions or liquidate your withdrawals to adjust your overall allocation back to your target allocation, to minimize transaction and tax costs.

Beginning on or after October 1, 2021, if during a rebalance the proceeds resulting from the sale of securities are designated to purchase a new Vanguard fund not already held in a Vanguard Brokerage Account and the amount of the purchase is less than 0.50% of the total value of your Portfolio (not to exceed \$10,000), then the proceeds will be used to instead purchase additional shares of the largest existing holding of any one of the Four Totals, or a surrogate Vanguard fund, or another diversified Vanguard fund already held in the account for which the purchase recommendation was generated. If the account for which the purchase

recommendation was generated does not contain an existing holding of any one of the Four Totals, or a surrogate Vanguard fund, or another diversified Vanguard fund, then the proceeds will be invested in the settlement fund of the account.

Beginning on or after October 1, 2021, if during a rebalance the proceeds resulting from the sale of securities are designated to purchase additional shares of a Vanguard ETF in a Vanguard Brokerage Account, the amount of the recommended purchase will be compared to a price we set as a proxy for the market price of such Vanguard ETF. If the amount of the recommended purchase is less than the proxy price, we will instead purchase additional shares of the largest existing holding of any one of the Four Totals, or a surrogate Vanguard fund, or another diversified Vanguard fund already held in the account for which the purchase recommendation was generated. If the account for which the purchase recommendation was generated does not contain an existing holding of one of the Four Totals, or a surrogate Vanguard fund, or another diversified Vanguard fund, or if the proceeds are insufficient to purchase additional shares of such existing holdings, then the proceeds will be invested in the settlement fund of the account.

Beginning on or after October 1, 2021, if during a rebalance the proceeds resulting from the sale of securities are designated to purchase securities worth less than one dollar (\$1.00) in a Vanguard Brokerage Account, then the proceeds will instead be invested in the settlement fund of the account.

Notwithstanding the ability to place reasonable restrictions on your Portfolio, individual investments will be evaluated during a quarterly review and sold in certain cases if we deem it appropriate. For example, individual securities retained in taxable accounts to avoid generating a taxable gain may be sold if that sale would result in a loss. Additionally, individual securities that may initially satisfy our portfolio construction and diversification standards and be held pursuant to your financial plan may thereafter violate those standards, which could cause us to sell the individual security. If we recommend a full liquidation with respect to securities held in a Vanguard IRA® or Plan Account and the security being liquidated isn't held in any other account, we'll notify you at least 30 days before the change is implemented.

We don't perform rebalancing services for clients who only receive a financial plan and do not enroll in the ongoing advised service.

As owners of Vanguard Funds, Vanguard Advisers, Inc. ("VAI"), clients will receive or have access to communications with respect to those securities. These communications include transaction confirmations, quarterly account statements, prospectus updates, annual and semiannual reports, and proxy statements relating to their holdings (as appropriate), as well as general Vanguard newsletters, emails, and other communications.

## Client referrals and other compensation

We don't receive compensation or other economic benefits from persons other than clients for providing investment advice or advisory services to our clients. We'll run prospecting and promotional campaigns from time to time to attract new clients to the service ("Referral Programs"). These Referral Programs may include compensating affiliates, strategic partners, or third-party solicitors for referring the service to prospects. Compensation will include flat fees or payments based on certain performance triggers, like scheduling an appointment with an advisor or enrolling in the service. Clients aren't charged any fee nor do they incur any additional costs for us running these Referral Programs. We have oversight of third parties involved in the Referral Programs, and prospects will be informed of any such Referral Programs receiving compensation prior to becoming a client.

Note that Vanguard affiliates will also receive compensation in the form of expense ratios from Vanguard Funds and revenue sharing with third-party funds and certain VAI supervised persons are eligible for variable compensation as discussed in the "Fees and compensation" section above.

## Custody

If you hold a mutual fund account directly with Vanguard, you will receive quarterly or more frequent account statements from Vanguard, the transfer agent of the Vanguard Funds, in lieu of a qualified custodian. Vanguard will also transmit transaction confirmations to you in connection with purchases and sales made in your Vanguard mutual fund account.

If you maintain a Vanguard Brokerage Account, VMC serves as qualified custodian and will send quarterly or more frequent account statements directly to you. VMC will also transmit transaction confirmations to you in connection with purchases and sales made in your Vanguard Brokerage Account (provided that VMC may furnish periodic statements of account activity in lieu of transaction confirmations in compliance with Rule 10b-10 of the Securities Exchange Act of 1934).

If you are an IIG Client investing through a Plan Account, the qualified custodian for the plan's assets is VFTC. You will receive quarterly statements from Vanguard, in its capacity as plan recordkeeper.

You should carefully review and compare all account statements and reports from Vanguard and VMC with account information we make available and contact the appropriate entity with questions.

## Investment discretion

This service is a nondiscretionary service. This section applies to those clients who have enrolled in the ongoing advised service. In connection with the ongoing advised service, you must approve your financial plan and direct us to implement the recommended investment strategy for your Portfolio either verbally or in writing (including email and similar electronic communications). We'll construct and invest

your Portfolio according to your approved financial plan, including any reasonable restrictions you may want to impose on our investment of the Portfolio. Changes to the investment strategy set forth in the financial plan will be made only with your consent. Until you approve the financial plan and direct its implementation, we'll take no action with respect to the assets held in the Portfolio. Within five business days after you approve the financial plan, we'll initiate steps to begin implementing your investment strategy as specified in the financial plan, unless you direct us to implement the financial plan over time.

By implementing the financial plan, we'll have the authority, on your behalf, to purchase, sell, exchange, or transfer assets; rebalance and reallocate assets; and execute other necessary and appropriate transactions, including transmitting verbal, written, or online instructions to effect transactions, at the times and according to the terms established in the financial plan. We may recommend a change to the investments used to effect the investment strategy set forth in the financial plan, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If we recommend such a change, we'll notify you at least 30 days before the change is implemented. Any notice of a proposed change in investments will include the effective date of the proposed change, instructions you can follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed your consent to the proposed change in investments. Your financial plan will also contain a standing instruction to reassess your asset allocation or rebalance the Portfolio on a predetermined basis if and to the extent set forth in the financial plan.

In your agreement with us, you'll grant us the authority to open new accounts, except for new brokerage accounts, with our affiliates for you with identical registrations to transfer and segregate securities in the Portfolio. We'll exercise this authority to fulfill your stated needs for the Portfolio or your goals-based reporting, such as when you only want to enroll a portion of your funds or securities in the ongoing advised service or if we need to segregate your investments to support various goals you selected.

## Voting client securities

Upon request, an advisor may provide additional information about proxy votes and corporate actions for clients enrolled in the ongoing advised service. The information may include details on the security itself, effect on the client's Portfolio, recommended voting by Vanguard or third parties, and the advisor's recommendation.

We won't vote or exercise similar rights for your securities. The exercise of all voting rights associated with any security or other property you hold shall be your responsibility. We won't advise or act for you in any legal proceedings, including bankruptcies or class actions, involving securities you hold or previously held or the issuers of those securities. Proxies will be delivered directly by the security's issuer, the custodian, or its agent.

For securities held within an IIG Client's Plan Account, responsibility for the exercise of all voting rights will be outlined by the plan.

### **Financial information**

We aren't aware of any financial condition reasonably likely to impair our ability to meet contractual commitments to you.

### **Requirements for state-registered advisors**

VAI is a federally registered investment advisor.

### **Investment risks**

#### **Securities recommendations and risk**

Although we'll recommend prudent and diversified investment strategies, please remember that all investments, including mutual funds, involve some risk, including possible loss of the money you invest. Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account(s). There's no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. We make investment recommendations using historical information. There's no guarantee that an investment strategy based on historical information will meet your investment objectives, provide you with a given level of income, or protect against loss, particularly when future market conditions are drastically different from the information used to create your strategy. Diversification doesn't ensure a profit or protect against a loss. There's no assurance that you'll achieve positive investment results by using our service. We can't guarantee the future performance of your investments. Please consult a fund's prospectus for more information about fund-specific risks. You should carefully consider all of your options before acting on any advice you receive.

#### **Risks associated with algorithm usage**

Our proprietary algorithms are based on Vanguard's market assumptions and analysis. The algorithms don't consider prevailing market conditions when making recommendations to you. While we have standards governing the development, testing, and monitoring of our algorithms, there's a risk the algorithms and associated software may not perform as intended for various reasons, including unintended consequences due to modifying the algorithms or underlying software code. The SEC has provided further information for investors to consider when engaging digital advice services. The guidance can be found at <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-45>.

#### **Data risk**

Data risk is the chance that the Service receives inaccurate, incomplete, or outdated data. The Service relies on data provided by clients or authorized by clients to be provided by third-party vendors. We don't independently verify the accuracy or completeness of provided data. If a client decides to aggregate or integrate external accounts, there's

no guarantee that information provided by the third-party vendor regarding non-Vanguard accounts will be accurate or complete. Additionally, to the extent our projections and calculations are based on historical market data, labor statistics, or other historical economic data, models aren't updated in real time, and there will be a delay in incorporating significant events into models.

#### **Vendor risk**

The Service's data aggregation capabilities rely on third-party vendors. It is possible that Clients' ability to use the web experience or the forecasting that the Service provides could be negatively impacted due to the performance of a third-party vendor. Third-party vendors may limit their liability to Clients.

#### **Cybersecurity risks**

The increased use of technology to conduct business could subject VAI and its third-party service providers to risks associated with cybersecurity. In general, a cybersecurity incident can occur as a result of a deliberate attack designed to gain unauthorized access to digital systems. If the attack is successful, an unauthorized person or persons could misappropriate assets or sensitive information, corrupt data, or cause operational disruption. A cybersecurity incident could also occur unintentionally if, for example, an authorized person inadvertently released proprietary or confidential information. Vanguard has developed robust technological safeguards and business continuity plans to prevent, or reduce the impact of, potential cybersecurity incidents. Additionally, Vanguard has a process for assessing the information security and/or cybersecurity programs implemented by third-party service providers, which helps minimize the risk of potential incidents. Despite these measures, a cybersecurity incident still has the potential to disrupt business operations, which could negatively impact VAI and/or the Service's Clients (including prospective Clients).

*The following summarizes the principal risks associated with the mutual funds, ETFs, collective investment trusts, and other pooled investments (these investments are collectively referred to herein as "funds") recommended by the Service:*

#### **Discretionary manager risk**

It is possible that poor security selection or focus on securities in a particular sector, category, or group of companies will cause one or more of the funds or underlying funds—and, thus, the fund—to underperform relevant benchmarks or other funds with a similar investment objective.

#### **Index sampling risk**

There is the chance that the securities selected for a fund in the aggregate won't provide investment performance matching the fund's target index.

#### **ETF risk**

Vanguard ETF shares are not redeemable directly with the issuing fund other than in very large aggregations worth

millions of dollars. ETFs are subject to market volatility. When buying or selling an ETF, you will pay or receive the current market price, which may be more or less than net asset value.

#### **Stock market risk**

Funds that invest in stocks are subject to the chance that stock prices overall will decline. Stock markets tend to move in cycles, with periods of rising prices and periods of falling prices.

#### **Asset concentration risk**

Funds that invest a high percentage of their assets in a few companies are subject to the chance that their performance may be hurt disproportionately by the poor performance of relatively few investments.

#### **Sector risk**

Funds that invest all or substantially all of their assets in a particular sector are subject to the chance that significant problems will affect a particular sector or that returns from that sector will trail returns from the overall stock market. Daily fluctuations in specific market sectors are often more extreme than fluctuations in the overall market. If a fund invests all, or substantially all, of its assets in a particular sector, the fund's performance largely depends—for better or for worse—on the general condition of that sector.

#### **Company stock funds**

Funds that are invested exclusively in a single stock are concentrated and therefore considered riskier than diversified stock funds.

#### **Investment-style risk**

Funds that invest in companies based on their level of capitalization are subject to the chance that returns from large-, mid-, and small-capitalization stocks will trail returns from the overall stock market. Large- and mid-cap stocks each tend to go through cycles of doing better—or worse—than other segments of the stock market or the stock market in general. These periods have, in the past, lasted for as long as several years. Historically, mid- and small-cap stocks have been more volatile in price than large-cap stocks. The stock prices of mid- and small-size companies tend to experience greater volatility because, among other things, these companies tend to be more sensitive to changing economic conditions.

#### **International risk or country/regional risk**

Funds that invest in international securities are subject to the chance that world events—such as political upheaval, financial troubles, or natural disasters—will adversely affect the value of securities issued by companies in foreign countries or regions. If a fund invests a large portion of its assets in securities of companies located in any one country or region, including emerging markets, its performance may be hurt disproportionately by the poor performance of its investments in that area. Country/Regional risk is especially high in emerging markets.

#### **Emerging markets risk**

Funds that invest in securities of companies that are located in developing nations are subject to the chance that the

prices of these securities will be substantially more volatile, and substantially less liquid, than the securities of companies located in more developed foreign markets.

#### **Currency risk**

Funds that invest in international securities are subject to the chance that the value of a foreign investment, measured in U.S. dollars, will decrease because of unfavorable changes in currency exchange rates. Currency risk is especially high in emerging markets.

#### **Call risk**

Funds that invest in bonds are subject to the chance that during periods of falling interest rates, issuers of callable bonds may call (redeem) securities with higher coupons or interest rates before their maturity dates. The fund would then lose any potential price appreciation above the bond's call price and would be forced to reinvest the unanticipated proceeds at lower interest rates, resulting in a decline in the fund's income. Call risk is generally low for short-term bond funds, moderate for intermediate-term bond funds, high for long-term bond funds, and high for high-yield bond funds.

#### **Prepayment risk**

Funds that invest in bonds are subject to the chance that during periods of falling interest rates, homeowners will refinance their mortgages before their maturity dates, resulting in prepayment of mortgage-backed securities held by the fund. The fund would then lose any price appreciation above the mortgage's principal and would be forced to reinvest the unanticipated proceeds at lower interest rates, resulting in a decline in the fund's income.

#### **Extension risk**

Funds that invest in bonds are subject to the chance that, during periods of rising interest rates, certain debt securities will be paid off substantially more slowly than originally anticipated, and the value of those securities may fall. This will lengthen the duration or average life of those securities and delay a fund's ability to reinvest proceeds at higher interest rates, making a fund more sensitive to changes in interest rates. For funds that invest in mortgage-backed securities, extension risk is the chance that, during periods of rising interest rates, homeowners will repay their mortgages at slower rates.

#### **Credit risk**

Funds that invest in bonds are subject to the chance that the issuer of a convertible security will fail to pay interest or dividends and principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of that security to decline.

#### **Income risk**

Funds that invest in bonds are subject to the chance that the fund's income will decline because of falling interest rates. Income risk is generally high for short-term bond funds, low for long-term bond funds, and high for limited-term bond funds.

**Interest rate risk**

Funds that invest in bonds are subject to the chance that bond and loan prices overall will decline because of rising interest rates.

**State-specific risk**

Funds that invest in bonds from a specific state or municipality are subject to the chance that developments in that state or municipality will adversely affect the securities held by the fund. Because the fund invests primarily in securities issued by the state and its municipalities, it's more vulnerable to unfavorable developments in the state than are funds that invest in municipal securities of many states. Unfavorable developments in any economic sector may have far-reaching ramifications on the overall state municipal market.

**Liquidity risk**

Funds that invest in bonds are subject to the chance that the fund may not be able to sell a security in a timely manner at a desired price. Liquidity risk is generally low for short-term bond funds, moderate for intermediate-term bond funds, and high for long-term bond funds.

**Currency hedging risk**

Funds that invest in bonds are subject to the risk that the currency hedging transactions entered into by a fund may not perfectly offset the fund's foreign currency exposure.