Vanguard Personal Advisor Services Brochure

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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"). 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 contact 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 also is available on the SEC's website at 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: There have been no material changes that impact the service or existing clients in Vanguard Personal Advisor Services since the last published brochure.

The brochure has been updated with information regarding the different asset-based service models made available to clients enrolled in the Ongoing Service, as defined below.

Advisory business

VAI is a Pennsylvania corporation that provides investment advisory services to a wide variety of clients. As an SEC-registered advisor, VAI has a fiduciary duty to act in its clients' best interests and has a standard of care to meet when dealing with clients. VAI was incorporated in and has been in business since 1995. VAI is 100% owned by Goliath, Inc., a Delaware corporation. As such, VAI is an indirect, wholly owned subsidiary of The Vanguard Group, Inc. ("Vanguard"), the sponsor and manager of the family of mutual funds and ETFs (exchange-traded funds) comprising The Vanguard Group of Investment Companies ("Vanguard® Funds"), which VAI typically recommends as investments. Please see the section of this brochure entitled "Other financial industry activities and affiliations" for more information.

Vanguard Personal Advisor Services

Vanguard Personal Advisor Services is an advisory service launched by VAI in 2013 that provides both onetime advice services and an ongoing managed account service. Clients with a preference for a digital experience can also interact with Vanguard Personal Advisor Services electronically.

Onetime investment advice

If you're interested in onetime help or some guidance in managing your portfolios on your own, Vanguard Personal Advisor Services, also known as Vanguard Financial Planning Services to participants in eligible employer-sponsored retirement plans ("Participants"), can help. On a nondiscretionary basis, it's designed to offer you: (1) an opportunity to engage in a discussion with a financial planner concerning specific investment-related questions or topics or (2) an investment strategy for accounts that you identify, based on a personalized financial plan created by VAI (the "Financial Plan"). In choosing to receive a Financial Plan, you'll provide VAI with information relating to your financial situation, investment objectives, and willingness and ability to take risk. A Financial Plan will then be formulated for you that will recommend an asset allocation and specific investments that may be maintained in your account(s) to meet that allocation. Financial Plans generated for clients will typically recommend specific Vanguard Funds and generally not include recommendations to invest in 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 certain circumstances, a Financial Plan created for a Participant may include and/or be limited to recommending allocations to third-party mutual funds or company stock, in addition to Vanguard Funds, depending on the investment options selected for inclusion in the retirement plan by the Participant's employer. A Financial Plan for a Participant will also include advice regarding how to allocate future contributions to the retirement plan. You may be able to impose reasonable restrictions upon our investment strategy, which may include an ability to accommodate non-Vanguard securities in your Financial Plan (please see the section of this brochure entitled "Reasonable restrictions" for more information). Within the Financial Plan, VAI will also provide goals-based forecasting and recommendations on how to better meet your investing goals, based on your situation and goals at the time you engage VAI. More information regarding the methodology used in creating the Financial Plan is provided in detail below. Please keep in mind that you'll need to affirmatively opt into our ongoing advisory service in order for us to implement transactions and rebalance your portfolio on an ongoing basis in accordance with the Financial Plan. If you don't opt into the ongoing advisory service, Vanguard Personal Advisor Services constitutes point-in-time advice, and we won't monitor or initiate transactions in any of your accounts. You'll be solely responsible for initiating the transactions and implementing the other recommendations provided in the Financial Plan.

Ongoing advised accounts

VAI also offers the same personalized Financial Plan as an affordable portfolio for those accounts that you enroll in the ongoing advisory service (the "Ongoing Service"). (Please note that the Ongoing Service isn't currently offered to Participants or other clients with respect to assets held in employer-sponsored retirement plans.) In choosing the Ongoing Service, you'll provide VAI with information relating to your financial situation, investment objectives, and willingness and ability to take risk. A Financial Plan will then be formulated for you that will recommend an asset allocation and specific Vanguard Funds that will be maintained in your account(s) to meet that allocation. The recommendations made by VAI to clients in connection with the Ongoing Service will normally be limited to allocations in Vanguard Funds and will generally not include recommendations to invest in individual securities or bonds, CDs, options, derivatives, annuities, third-party mutual funds, closed-end funds, unit investment trusts, partnerships, or other non-Vanguard securities, although you may be able to impose reasonable restrictions upon our investment strategy, which may include an ability to accommodate non-Vanguard securities in your ongoing Financial Plan (please see the section of this brochure entitled "Reasonable restrictions" for more information).

In most cases, the Financial Plan will be reviewed and finalized during a consultation with an advisor. Certain clients may choose to forego scheduling an initial or follow-up advisor consultation and, instead, enroll in the Ongoing 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. Once you've accepted the terms of the Financial Plan and are enrolled in the Ongoing Service, VAI will perform the necessary transactions to hold the mix of Vanguard Funds recommended to meet the asset allocation selected for your account(s) in the Financial Plan within five business days. Changes to the investment strategy set forth in the Financial Plan will be made only with your consent. Collectively, the accounts enrolled in the Ongoing Service where investments are made by the Ongoing Service to maintain your target allocation will be referred to herein as the "Portfolio." Once you've agreed to ongoing advisement of the Portfolio, the Ongoing Service will provide regular monitoring and review of the Financial Plan, and rebalancing of the Portfolio pursuant to the standing instructions you approve in the Financial Plan.

By enrolling in the Ongoing Service, you're granting VAI authority to purchase and sell securities on your behalf. Accordingly, VAI may change the investments used to effect the investment strategy set forth in the Financial Plan at any time and without prior notice to you, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If, however, VAI recommends such a change with respect to securities held in an individual retirement account as that term is defined in Section 408(a) of the Code ("IRA"), VAI will notify you at least 30 days before the change is implemented. Any notice of a proposed change in investments held in an IRA will include the effective date of the proposed change, instructions you may follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed to be your consent to the proposed change in investments.

Within the Financial Plan, VAI will use the information you provided about your investment objectives, your financial situation, and your risk tolerance to provide goals-based forecasting and recommendations on how to better meet your investing goals. 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.

The Ongoing Service also offers a web experience that includes content based on your goals and provides personalized reporting. The web experience is accessed by logging on to your account at vanguard.com. Certain account registrations, such as irrevocable trusts or supporting entity-type registrations, may preclude clients from a web experience. For clients enrolled in the Ongoing Service, VAI will contact you, at least annually, to validate your financial planning needs and the strategy chosen for the Portfolio and determine 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.

In connection with the Ongoing Service, you'll retain the right to: (i) withdraw securities or 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 Ongoing Service, or any other client of the Ongoing Service, as a condition precedent to initiating such proceeding.

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

If you have any questions throughout the process, you'll always have the option to speak with an advisor, even if you choose to use the digital experience.

Additional information for Participants and Vanguard IRA® holders

VAI intends both the onetime Financial Plan and the Ongoing Service 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 the onetime Financial Plan and the Ongoing Service 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 regarding investment of those assets. Additionally, the onetime Financial Plan and the Ongoing Service will be audited annually by an independent auditor for compliance with the requirements of the statutory level-fee exemption and related regulation. A copy of the most recent version of the auditor's findings will be provided to clients with IRAs enrolled in the onetime Financial Plan and the Ongoing Service or posted and made available for review by those clients at vanguard.com within 30 days after VAI receives the report from the auditor to sponsors of eligible employer-sponsored retirement plans who make onetime Financial Plan services available to Participants.

Reasonable restrictions

When requesting a Financial Plan or enrolling in the Ongoing Service, you'll have the ability to impose reasonable restrictions on the investments recommended for the Financial Plan or Portfolio. Specifically, you may be able to request that certain non-Vanguard securities be held as part of the Financial Plan or Portfolio, provided that those securities meet certain standards imposed by VAI. Certain investments that you may request, such as individual stocks and bonds, stock-sector funds, and other non-Vanguard funds, may not offer the same degree of diversification, liquidity, or performance consistency that may be available with the Vanguard Funds we normally recommend.

If you request that such securities remain in the Financial Plan or the Portfolio, VAI will analyze whether such securities may fit into the overall stock or bond allocations recommended for the Financial Plan or the Portfolio. When analyzing securities, VAI will rely upon Vanguard's asset classification assessments based on information received from third-party data providers in order to categorize these investments. The Ongoing Service may retain such securities upon your request as long as the resulting Portfolio meets our standards of portfolio diversification.

If VAI maintains a sell recommendation for a particular security that you want to be held as part of the Portfolio, such security may be characterized by VAI as being subject to a client-directed hold if it meets standards imposed by VAI. If a security is characterized as being subject to a client-directed hold, VAI may permit that security to remain part of the Portfolio. VAI won't be responsible, however, for performing due diligence on any security that's subject to a client-directed hold.

You may 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. Any restriction you wish to impose is subject to review and approval by Vanguard Personal Advisor Services. Restrictions will be allowed as long as they aren't inconsistent with the Vanguard Personal Advisor Services methodology. The Portfolio will remain diversified by asset class and within each asset class to ensure that no single security or class of securities will impose an unreasonable level of risk. If your desired restrictions are unreasonable or if we believe that the restrictions are inappropriate for you, we'll notify you that, unless the instructions are modified, we may remove particular securities from the Portfolio, remove particular accounts from the Portfolio, or terminate the Ongoing Service.

Funding or adding assets to accounts

While enrolled in the Ongoing Service, you may transfer assets to and from the Portfolio at any time, and you may add or remove accounts at any time, provided you give VAI prior notice. Additionally, if you process a transaction in a Vanguard Brokerage Account enrolled in the Ongoing Service and don't have sufficient funds to cover the transaction, an advisor will raise cash by selling a portion of the largest position in the impacted account based on a withdrawal hierarchy methodology agreed upon with your advisor. Transactions performed without prior notice to VAI may be reversed or unwound by VAI in order to maintain the recommended allocation for your Portfolio. Assets 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) and all other purchases less than $100 will be allocated in accordance with your Financial Plan upon your next rebalancing opportunity, or as otherwise agreed upon with an advisor. All other transactions will be handled as described below.

Spending Fund

The Ongoing Service will recommend that you establish a new money market fund, or designate an existing money market fund, to facilitate cash flow into and out of the managed accounts, herein defined as a "Spending Fund." If you've established a Spending Fund, any additional cash added will remain in the established, or existing, Spending Fund until the total amount of assets in the Spending Fund exceeds your agreed-upon maximum limit (the "Upper Threshold"). When the Upper Threshold is exceeded, your 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 your current Financial Plan. You 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 your current Financial Plan to rebalance assets among your holdings in order to meet the Target Balance in the Spending Fund.

When making withdrawals from the Portfolio during rebalancing or a Spending Fund replenishment, or when making a onetime withdrawal, assets will be taken in the following order by default, as applicable: required minimum distributions (RMDs), taxable assets, tax-deferred accounts, and tax-free (Roth) accounts. You may work with an advisor to customize your withdrawal hierarchy when you need to redeem assets. The Primary Advice Client will be able to accept or customize the withdrawal hierarchy and direct withholding elections for all accounts in the Financial Plan, including IRAs or assets held solely in the Secondary Advice Client's name. Generally, the methodology will look across all holdings in each account within the asset category (RMD, taxable, tax-deferred, or Roth) to determine which holdings should be depleted first. The methodology aims to be tax-efficient but may not be equitable across account registrations, meaning an individual account could be depleted before a joint account or vice versa. A withdrawal won't be proportionately taken from all accounts in the determined category.

Cash transfers

When transferring cash to the Portfolio where you haven't established a Spending Fund, it will be deposited into your existing money market fund, or settlement fund, in the designated account, or you hereby agree to establish, at the time of transfer, an account in Vanguard Federal Money Market Fund for the purpose of accepting your transfer of cash into the Portfolio. Cash purchases into money market funds will be invested within five business days of the transfer according to the terms of the current Financial Plan. If you haven't yet established a Financial Plan for the transferred assets, they'll be held in a money market fund until you establish a Financial Plan for such assets.

Purchases into existing managed securities

Assets transferred into existing managed securities will be invested within five business days of the transfer according to the terms of the current Financial Plan. If you haven't established a Financial Plan, assets will be held in kind until you establish a Financial Plan for such assets. If you and your advisor have agreed upon terms for strategic purchases into existing securities, additional action may not be required.

Purchases or transfers of new securities

Where you haven't prenotified VAI of purchases or transfers of new securities in the Portfolio, an advisor will review the transactions or transfers to determine the impact to your Financial Plan and decide whether to rebalance the Portfolio or take other action. If changes need to be made as a result of the transactions or transfers, an advisor will contact you to discuss your options. If you and your advisor have agreed upon terms for the purchase or transfer, additional action may not be required. VAI and its affiliates reserve the right to reject the transfer of certain securities.

Account restrictions

While enrolled in the Ongoing Service, you should not 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 Service. You'll also be prohibited from establishing or maintaining other services on any accounts in the Portfolio, including but not limited to automatic trading services (such as automatic investment/withdrawal/exchange) and setting RMD payments. Other account transactions or services may be restricted or unavailable through the web experience but can be processed or enabled with the assistance of an advisor. For example, cost basis provisioning and dividend and capital gain distribution elections may require the assistance of an advisor.

You may not receive third-party discretionary advice on assets held in the Portfolio under this Ongoing Service. If you wish to receive third-party discretionary advice regarding certain securities in the Portfolio, VAI can assist you in transferring those securities to an account outside of the Portfolio or you may choose to terminate the Ongoing Service. You may separately arrange for the provision of advice by another provider that has no material affiliation with, and receives no compensation in connection with, the mutual funds, securities, or other property that's held in your account(s).

As of December 31, 2017: Vanguard Personal Advisor Services had a total of $96.9 billion in discretionary assets under management; VAI managed $76.6 billion in assets; and, an affiliated entity, Vanguard National Trust Company (see "Other financial industry activities and affiliations") managed $20.3 billion in assets.

Fees and compensation

Advisory fee

The annual advisory service fee paid to VAI for clients enrolled in the Ongoing Service will be as follows:

0.30%	On assets below $5 million
0.20%	On assets from $5 million to below $10 million
0.10%	On assets from $10 million to below $25 million
0.05%	On assets of $25 million and above

Fees will be calculated quarterly and based on your average daily balance in the Portfolio across the entire fee period. A fee period is the prior calendar quarter. The fee will be assessed on the first Monday (non-holiday) after the completion of a fee period and will generally be deducted within two weeks of assessment. A total fee will be calculated across all securities in the Portfolio, with the exception of money market fund positions. VAI won't assess a fee on the balance of money market fund assets held within the Portfolio. VAI will select the designated fee account(s) of the Portfolio from which the fee will be deducted and then will systematically determine which securities to sell in order to raise proceeds sufficient to cover the fee based upon a hierarchy of expected fund volatility from least to most volatile. In situations where you own both Vanguard mutual fund and Vanguard Brokerage Accounts, we'll first look to sweep the fees from the mutual fund account. The fund hierarchy prioritizes mutual funds with relatively low volatility and expected tax consequences over funds with higher volatility and potential embedded gains. Unless the only account in the Portfolio is an IRA, VAI won't select the IRA as the account from which the fee should be deducted. In the case of multiple IRAs only in the Portfolio, the fee will be taken proportionally from all of the IRAs in the Portfolio. In addition, when sweeping fees from a taxable account with a Spending Fund, we'll prioritize the Spending Fund first. VAI reserves the right to change the annual service fee or charge additional fees for removal of an account, or for other services, upon 30 days' written notice to you. Upon removal of an account, or termination of the Ongoing Service, VAI may require payment of any accrued fees from the time of the last quarterly payment until the termination date. VAI may offer a negotiated fee schedule to clients, including fee structures based on combined assets of related clients. The assets of related clients can only be combined if they're contained within a Portfolio at the time the fee is assessed. In these cases, clients will be notified in writing that they qualify for an alternate fee schedule. Clients using an alternate fee schedule will still follow the same calculation and fee assessment processes outlined above. The Ongoing Service reserves the right to provide periodic fee waivers where it deems appropriate.

There may be periods of time when rebalancing isn't needed because the Portfolio is appropriately allocated. The Ongoing 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.

Participants in eligible employer-sponsored retirement plans receiving onetime advice, as authorized by their plan sponsor, will be charged a fee for the Financial Plan as outlined below, unless they're eligible for a fee waiver. Fee waivers will be applied to Participants who have more than $500,000 or are over age 55.

Participant's total Vanguard assets	Financial Plan fee
$50,000 to $500,000	$250
Less than $50,000	$1,000

If payment is required, Participants may pay by check.

Fees for the Financial Plan or Ongoing Service are in addition to the underlying fund expenses that all fund shareholders pay. You should review this information and carefully consider the impact of these fees and compensation when evaluating the onetime advice offer or the Ongoing Service before approving your Financial Plan or implementing any recommendations provided through the Financial Plan or onetime advice offer.

Vanguard Fund fees

The advice provided by VAI may include recommendations to sell, hold, or purchase Vanguard Funds. Where we transact to implement your Financial Plan or you act in accordance with such advice, it will result in the payment of fees to the Vanguard Funds and to 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 that 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. You may also incur transaction or brokerage charges when transacting in Vanguard ETFs®.

Vanguard Variable Annuity fees

When a Portfolio contains a Vanguard Variable Annuity, you'll incur an expense ratio for the annuity, which will vary depending on the annuity's investment allocation. The expense ratio includes an administrative fee of 0.10% payable to Vanguard, a mortality and expense risk fee of 0.17% payable to Transamerica Financial Life Insurance Company, and the expense ratio of the Vanguard Variable Insurance Fund portfolio comprising the investment allocation of the variable annuity payable to Vanguard. The variable annuity expense ratio excludes additional fees that would apply if the Return of Premium death benefit rider or Secure Income™ (Guaranteed Lifetime Withdrawal Benefit) rider is elected. In addition, contracts with balances under $25,000 are subject to a $25 annual maintenance fee.

Account fees

You may also incur account service fees, commission charges, other account charges and processing fees in connection with establishing accounts with VAI's affiliates. You should review the terms of your Mutual Fund Investment Kit, IRA Kit, Brokerage Account Kit, or Annual Plan Fee Disclosure Notice for details regarding fees that may be assessed in connection with these accounts. Vanguard Marketing Corporation ("VMC"), a registered broker-dealer that's a wholly owned subsidiary of Vanguard and an affiliate of VAI, offers a limited number of commission-free transactions to clients who are eligible for certain service levels. If you're currently enrolled in one of these services, transactions in your Portfolio will reduce your number of commission-free transactions when executed.

Non-Vanguard fund fees

The purchase or sale of third-party mutual fund shares through Vanguard or its affiliates may be subject to a load or sales charge. A fund's expenses are detailed in the fund's prospectus. In the event that VAI recommends that you transact in non-Vanguard investments, you may incur additional fees, including transaction fees, brokerage charges, sales charges, expense ratios, commissions, markups, or other fees or expenses. In addition, Vanguard or its affiliates may receive other compensation, including asset-based sales charges, service fees, revenue-sharing payments, 12b-1 fees, or other fees, in connection with such investments. Please see the section of this brochure entitled "Brokerage practices" for more information about brokerage charges.

Retirement plan fees

Participants in employer-sponsored retirement plans may also directly or indirectly bear the fees assessed by Vanguard for recordkeeping services provided by Vanguard to a retirement plan. In connection with its services, Vanguard receives fees that are separate from, and in addition to, any fees assessed by 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 fees assessed by VAI. Participants in employer-sponsored retirement plans for which Vanguard provides recordkeeping or investment services may be permitted to invest in collective trusts, company stock funds, or certain customized investment options for which 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 an affiliate of VAI.

Participants in employer-sponsored retirement plans for which Vanguard provides recordkeeping services 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 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 some combination thereof.

VAI's advice not impacted by fees

The advice provided by the advisor won't take into consideration whether Vanguard or any of its affiliates would receive fees from its recommendation to purchase, hold, or sell Vanguard Funds or non-Vanguard investments. Fees received by VAI and compensation paid to its employees, agents, and registered advisors for onetime advice or recommendations through the Ongoing Service don't vary on the basis of any investment options selected, and the advisors who deliver onetime advice and the Ongoing Service aren't compensated for or on the basis of any recommendation or sales of specific securities.

Performance-based fees and side-by-side management

VAI and its advisors don't receive any fees for advisory services provided to you that are 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 clients of Vanguard and prospects with a minimum of $50,000 of investable cash or securities in the Portfolio. Eligible clients include those with individual accounts (including IRAs and Vanguard Variable Annuity accounts), joint accounts, and revocable and irrevocable trust accounts. Participants in eligible employer-sponsored retirement plans whose employers have approved the onetime Financial Plan offer are also eligible for onetime advice, as long as they otherwise qualify. Please note that the Ongoing Service isn't currently offered to Participants or other clients with respect to assets held in employer-sponsored retirement plans. Other account types may be considered for purposes of suggesting asset allocations or providing recommendations and goals forecasting, but VAI won't invest or reallocate assets in those other accounts.

Methods of analysis, investment strategies, and risk of loss

VAI's investment methodology incorporates our own 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 own fundamental research, as well as research obtained from a wide variety of external sources, both 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 generally believes that it can provide the best opportunity for success by maintaining a broadly diversified Portfolio—including investments from a variety of market sectors and asset classes—that focuses on maximizing after-tax returns. If, as a result of its periodic review, VAI makes material changes to our methodology that impact your Financial Plan, you'll be informed of the changes and then be given the opportunity to approve them.

Investment strategy for the Portfolio

VAI's investment strategies are designed with a disciplined, long-term approach that focuses on managing risk through appropriate asset allocation and diversification. VAI's methodology uses a strategic approach by first focusing on the mix of asset classes (i.e., stocks, bonds, 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 then to select the specific investments for your Portfolio.

VAI relies on information provided by the client and on certain assumptions based on Vanguard 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, in order to develop an investment strategy for you. All assumptions are estimates based on historical data and proprietary forecasts that, in VAI's opinion, serve as a useful and reasonable foundation on which to develop financial strategies.

Developing an asset allocation

First, VAI will gather information through the use of a questionnaire, an investor profile, and possible consultation with an advisor 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 developed by VAI uses this data to recommend a particular investing track and corresponding glide path that embodies the risk tolerance, asset allocation, and time horizon that's 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 your advisor at any time, and the advisor may have the ability to adjust your investing track to be 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. When multiple accounts are used 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. In some cases, VAI may consider the assets you own outside the Portfolio as part of the assessment of your investment situation to identify an appropriate asset mix. VAI will rely on the information provided by you in formulating the Financial Plan or the Portfolio. Any inaccuracies in that information could affect the recommendations and your Financial Plan or Portfolio.

When recommending, setting, and adjusting your asset allocation, VAI weighs "shortfall risk"—the possibility that a portfolio will fail to meet longer-term financial goals—against "market risk," or the chance that a 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.

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

VAI seeks to provide adequate diversification within each asset class. VAI recommends investing across different market segments to ensure sub-asset class diversification. VAI will establish allowable sub-asset class ranges. The Ongoing Service will adjust your Portfolio to position sub-asset classes within our allowable ranges. The Financial Plan or the Ongoing Service may propose the addition, removal, or adjustment of sub-asset class exposures based on continuing portfolio construction research performed by the Vanguard Investment Strategy Group or based upon 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 Ongoing Service will generally diversify the domestic and international stock Portfolio across market capitalizations within those segments in similar proportion to their long-term market weight. In addition, the Ongoing Service seeks to balance growth and value investment styles in portfolio construction. The Ongoing Service examines 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. See the "Investment risks" section of this brochure for further discussions 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. VAI generally seeks to build Financial Plans and Portfolios that are diversified across short-, intermediate-, and long-maturity bond funds and seeks to maintain an intermediate-term duration. An intermediate-term duration generally means that 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. The Financial Plan and the Ongoing Service also recommend a broad exposure to investment-grade bond funds (both corporate and Treasury bonds). The Financial Plan and the Ongoing Service will seek to build a high-credit-quality 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, the Ongoing Service examines bond sector exposure to ensure the Portfolio isn't concentrated in a single segment, which could expose the Portfolio to a higher level of risk. See the "Investment risks" section of this brochure for further discussions of risks.

Diverse investments, primarily consisting of low-cost Vanguard Funds

After determining the overall asset mix and your stock and bond sub-allocations, VAI's algorithm will then recommend appropriate investments for your Portfolio. VAI typically recommends Vanguard Funds based on their low cost and diversification. VAI may recommend active or index Vanguard Funds to achieve the recommended exposures. For Participants receiving advice on their employer-sponsored retirement plan assets, VAI will recommend purchasing the mix of funds available in the retirement plan (whether Vanguard Funds or non-Vanguard funds) that provide the lowest cost to the client while still accomplishing diversification. Generally, VAI approaches fund selection with a long-term, buy-and-hold approach and discourages switching strategies based solely on recent performance. However, VAI 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.

If your Portfolio will be constructed using cash as the starting point, you'll receive a recommendation to invest in some combination of Vanguard Total Stock Market Index Fund, Vanguard Total Bond Market Index Fund, Vanguard Total International Stock Index Fund, and/or a Vanguard money market fund. If your Portfolio is constructed using existing securities owned by you, we'll review the securities to determine whether these securities should be held in the Portfolio or sold immediately and we'll outline that recommendation in your Financial Plan. We'll weigh the tax costs of selling your current investments in determining how to transition you to the recommended Portfolio. We may retain certain investments at your direction, such that the resulting investments would represent an appropriately diversified Portfolio as per Vanguard's portfolio construction methodology. VAI won't perform due diligence or ongoing analysis to determine the merits of non-Vanguard funds and securities that are subject to a client-directed hold.

The estimated capital gains and/or losses for the recommended transactions are based on available cost basis information and are calculated using the cost basis method on file for each security. If the cost basis method is set to the specific identification method, we'll use the average cost method to estimate your capital gains and/or losses. If the cost basis of a particular security is unknown, we'll assume that the entire position is held at a gain. Actual capital gains and/or losses may differ from the estimates, as they're based on the price of the security at the time of sale. While the Ongoing Service may weigh the tax impact 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. Therefore, we strongly urge you to consider any tax consequences before implementation. Neither VAI nor any affiliated entity shall have any responsibility to pay these taxes.

Further, VAI doesn't provide tax advice, and any tax information provided isn't a substitute for the advice of a qualified tax advisor. You should consult with your tax advisor to discuss tax-related concerns.

Considering tax efficiency in allocating assets across multiple Portfolio accounts

For 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 the following tiered approach. First, the Financial Plan or Ongoing Service will generally attempt to fulfill your fixed income allocation in tax-advantaged accounts, unless you already hold individual bond positions that align with Vanguard's portfolio construction 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 Financial Plan or Ongoing Service generally limits your exposure to active equity funds to the remaining capacity, if any, in your tax-advantaged accounts after your Portfolio's target bond allocation has been fulfilled in those accounts. We may modify our approach to tax-efficient investing based on continuing portfolio construction research performed by the Vanguard Investment Strategy Group or changes in tax laws.

MinTax cost basis method

Once you've accepted the terms of the Financial Plan and are enrolled in the Ongoing Service, we'll use the minimum tax ("MinTax") cost basis method in performing the necessary transactions within your taxable accounts to construct your Portfolio and on an ongoing basis for all securities held in your taxable accounts in the Portfolio unless you affirmatively opt out of such method. The MinTax cost basis method is generally designed to minimize tax impact and lower an individual's tax burden by selecting 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 to you of a transaction but may not do so in every case. For example, if the taxable accounts within your 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 your taxes will vary depending on your individual circumstances. You should consult with your tax advisor to discuss whether the MinTax cost basis method is appropriate for you given your individual circumstances. Please refer to *Your 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 Service's use of the MinTax cost basis method constitute tax advice. Please consult with your tax advisor to discuss any tax concerns related to the Ongoing Service, including the appropriate cost basis method for you.

Adjusting the Portfolio asset allocation

Each quarter (with timing determined by your contract anniversary date, or as otherwise agreed upon with an advisor), the Ongoing Service will review your target allocation as illustrated in the asset allocation schedule found in your ongoing Financial Plan in relation to your investment time horizon to determine if a change in the target asset allocation you approved as part of your ongoing Financial Plan is recommended. If the Ongoing Service recommends a change to the Portfolio's target allocation, recommendations may also be made with respect to the purchase or sale of securities in the Portfolio in order 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 that the Ongoing Service can take these considerations into account when reviewing your asset allocation target. The Ongoing Service won't change the recommended asset allocation based on market conditions but may recommend a different asset allocation based on changes to your financial situation or investment objectives. If the Ongoing Service recommends a different asset allocation, you'll receive a new Financial Plan for your review and approval.

Securities recommendations and risk

VAI generally recommends investments in Vanguard Funds. Although VAI will recommend investment strategies designed to be prudent and diversified, please remember that all investments, including mutual funds and investment company securities, involve some risk, including possible loss of principal. 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. VAI generally makes investment recommendations using historical information. There's no guarantee that an investment strategy based upon 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 VAI. VAI 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 upon any advice you receive.

Risks associated with usage of an algorithm

The proprietary algorithms used by the Ongoing Service are based on Vanguard's market assumptions and analysis. When the algorithms are used to implement and rebalance your Portfolio they won't consider prevailing market conditions when trading within the Portfolio. The SEC has provided further information for investors to consider when engaging digital advice services. The guidance can be found at investor.gov/additional-resources/news-alerts/alerts-bulletins/investor-bulletin-robo-advisers.

Goals forecasting

The Ongoing Service will also provide projections to help you assess your ability to achieve your personalized financial goals. Projections may be based upon accounts included within the onetime Financial Plan or Portfolio or upon accounts held outside of the onetime Financial Plan or Portfolio. VAI's goals forecasting model uses index returns to represent asset classes. 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.

Although the onetime Financial Plan and the Ongoing Service will also offer goals forecasting for goals that are entirely supported by outside accounts, the onetime Financial Plan and the Ongoing Service will make an assumption about the asset allocation to be used for such goal that's based on the information gathered from you in connection with establishing the investment strategy for your onetime Financial Plan or Portfolio. If your outside accounts aren't invested in a similar manner as the accounts in your onetime Financial Plan or Portfolio, your actual investment results may vary significantly from what we're projecting. A variance in the actual asset allocation could significantly impact your likelihood of reaching a goal within the indicated time frame.

Non-Portfolio accounts and cost assumptions used in goals forecasting

Any goals that are forecasted using outside accounts (including other Vanguard accounts) are calculated based solely on the information that you provide with respect to the dollar amount of assets held in those accounts and your rate of contributions to those accounts. The Ongoing Service will continue to rely upon the information provided by you for as long as your goals are supported by such accounts, and VAI may not independently verify this information.

Finally, the actual costs of investments held in the onetime Financial Plan, Portfolio, and any outside accounts aren't factored into the projections. Instead, the onetime Financial Plan and the Ongoing Service assume an annual 50-basis-point (0.50%) expense for all accounts supporting a particular goal.

Benchmarks used in the calculations

The returns used in the simulations for each type of goal are based on data for the appropriate market indexes.

Retirement goals forecasting for near-retirees and retirees

One of the biggest challenges investors nearing or in retirement face is ensuring that savings and income will cover future expenses throughout what could be an extended lifetime. We seek to reduce the uncertainties surrounding this key financial concern. 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 identified by you.
- The impact 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 impact of variables, such as inflation and income taxes.

- The impact of different market scenarios on your account's rates of return.

It's important that the accounts supporting this 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.

To cover a broad range of outcomes, the onetime Financial Plan and the Ongoing Service will generate 10,000 scenarios. 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. The projections use forecasted returns for equities, bonds, and cash, which are applied to your Portfolio. These forecasted returns as well as inflation rates are provided through the Vanguard Capital Markets Model® ("VCMM"), developed by the Vanguard Investment Strategy Group, which is discussed in more detail later. Although VAI believes that the forecasts may reasonably project your retirement goal as supported by accounts invested in a diversified portfolio of Vanguard Funds, such projections may not correlate well to other assets held by you in outside accounts (accounts that you've included in our goal analysis but that aren't part of the onetime Financial Plan or the Portfolio). Accordingly, your actual investment results may vary significantly from our projections.

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 Portfolio's ending balance.

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 fluctuations in your portfolio's three-year annualized balance and is bound by annual increase and decrease thresholds that 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, it's assumed that you'll adjust your spending to match the new annual living expenses you'll be provided with at the beginning of each year.

Your estimated success rate is simply the fraction of these scenarios in which your balance is above zero at the end of your planning horizon.

Goals forecasting for accumulator goals

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

To cover a broad range of outcomes, the onetime Financial Plan and the Ongoing Service will generate 10,000 scenarios for each goal. The goal projections are hypothetical 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. The goal projections are forecasted returns for equities, bonds, and short-term reserves using Monte Carlo simulations to determine the projection for each goal. These forecasted returns as well as inflation assumptions are provided through the VCMM, developed by the Vanguard Investment Strategy Group, which is discussed in more detail later. Although VAI believes that the forecasts may reasonably project goals that are supported by accounts invested in a diversified portfolio of Vanguard Funds, such projections may not correlate well to other assets held by you in non-Portfolio accounts. Accordingly, your actual investment results may vary significantly from our projections.

The first step involves estimating the amount of assets that 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 that 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 may have during the spending phase. After adjusting for inflation, the Ongoing Service will 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. 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 that we estimate that, in 85% of the 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. In order to model the accumulation phase, you must provide the Ongoing Service with the current amount of assets you have in support of the goal and the amount that you intend to save annually until the start of the drawdown phase. Using the underlying asset allocation for the goal, the Ongoing Service will run the VCMM Monte Carlo simulations and calculate what percentage of scenarios had an ending balance, without considering taxes, greater than or equal to your target amount at the outset of the spending phase. The ability to meet a goal will be quantified using a success rate. A successful outcome is defined as one in which the projected ending account balance, without considering 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.

Trust goals forecasting

VAI can provide investment recommendations and ongoing management for certain trust accounts. VAI will 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 in assessing the trust's current cash flow and in creating 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 non-investment income sources, as identified by the trustee(s).
- The impact of variables, such as inflation and income taxes. The trust cash flow model will factor in trust-specific income tax considerations.
- The impact of different market scenarios on the rates of return of trust assets.

These assumptions may or may not be reflected in the trust's situation based on the information the trustee(s) have provided.

It's important that the accounts supporting this goal be able to 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.

To cover a broad range of outcomes, the Ongoing Service will generate 10,000 scenarios. 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. The projections use forecasted returns for equities, bonds, and cash, which are applied to your Portfolio. These forecasted returns as well as inflation rates are provided through the VCMM, developed by the Vanguard Investment Strategy Group, which is discussed in more detail below. Although VAI believes that the forecasts may reasonably project the trust's goal as supported by accounts invested in a diversified portfolio of Vanguard Funds, such projections may not correlate well to other assets held by the trust in non-Portfolio accounts (accounts that have been included in our goal analysis but that aren't managed by our Ongoing Service). Accordingly, the trust's actual investment results may vary significantly from our projections.

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 fraction of these scenarios in which the trust balance is above zero at the end of its planning horizon.

Vanguard Capital Markets Model

VCMM is a proprietary, state-of-the-art, financial simulation tool developed and maintained by the 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 forecast provided by the VCMM will be updated annually, 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 that's 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.

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.

Vanguard is truly a *mutual* mutual fund company. It's owned jointly by the funds it services and thus indirectly by the shareholders in those funds. Most other mutual funds are operated by management companies that may be owned by one person, by a private group of individuals, or by public investors who own the management company's stock. The management fees these companies charge include a profit component over and above the companies' costs of providing these services. By contrast, Vanguard provides services to its member funds on an at-cost basis, with no profit component, which helps to keep the funds' expenses low.

When giving advice to clients, VAI will recommend the purchase of Vanguard Funds serviced by VAI's corporate parent, Vanguard. VAI addresses the competing interests that could 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. VAI discloses to prospective clients that it recommends Vanguard Funds prior to, or at the establishment of, the advisory relationship. Although acting in accordance with VAI's 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 fees assessed by VAI, any competing interests that could arise are mitigated by the at-cost nature of Vanguard's services to the funds.

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 on an at-cost basis 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, VAI will recommend the purchase of Vanguard Funds distributed by VAI's affiliate, VMC. Since VMC performs its marketing and distribution services on an at-cost basis and doesn't receive transaction-based compensation in connection with the distribution of the Vanguard Funds, no competing interests arise from VAI's affiliation with VMC in its role as distributor of the Vanguard Funds and ETFs. 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 fees payable under the onetime Financial Plan and the Ongoing Service. Please see the section of this brochure entitled "Brokerage practices" for more information about brokerage charges.

Certain members of VAI's management responsible for the onetime Financial Plan and the Ongoing Service 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

VAI is 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. VAI 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"). Vanguard will perform administrative services in connection with Vanguard IRAs and certain employer-sponsored retirement plans, for which Vanguard may be reimbursed, at cost, by VFTC. 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 relating to 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 investment advisory services to a wide variety of clients. VNTC was chartered in 2001, but its business has been in operation since 1996. VNTC is a wholly owned subsidiary of The Vanguard Group, Inc.

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 that have access to information about Vanguard Fund trading activity or Vanguard client trading activity and are designed to ensure that 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.

Please see the previous section of this brochure entitled "Other financial industry activities and affiliations" for a discussion of VAI's affiliations with other Vanguard entities and how those affiliations may impact clients of VAI.

Brokerage practices

VAI doesn't usually recommend broker-dealers in connection with client transactions arising out of VAI's advice, as VAI generally recommends the purchase of Vanguard Funds. However, if you transact in Vanguard ETFs or non-Vanguard securities in the Portfolio, you may be required to establish or use an existing brokerage account held through VMC for those securities, and you'll agree in your account application to execute all Portfolio brokerage transactions through VMC. Transactions executed in a VMC brokerage account will be subject to VMC's usual and customary fees, markups, commissions, bid-ask spreads, and charges, separate and apart from the advisory fees assessed by VAI in connection with the Ongoing Service. Because VAI's advice generally recommends transactions in Vanguard Funds, VAI doesn't aggregate orders for trading through VMC.

Periodically, VAI conducts due diligence to review the execution quality of any transaction services provided by VMC for clients' Portfolios, primarily to oversee VMC's compliance with its best execution practices. VMC routes equity and option orders to various markets. VMC uses a top-down approach in selecting market participants with which VMC will establish a relationship. This approach includes a review of system availability and quality of service, as well as financial and regulatory standing. The designated market participants to which orders are routed are selected based on the consistent 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 in order to evaluate quality of execution.

Mutual fund transactions

Mutual fund trades in a VMC brokerage account 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 may also receive fees for the provisioning of various shareholder services in connection with the participation of certain mutual funds in the FundAccess program. These fees 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 may 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, sub-accounting 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. In the event that 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 assessed by VAI in connection with the Ongoing Service.

Exchange-traded fund transactions

Where VAI recommends Vanguard ETFs for the Portfolio, transactions will be placed as market orders to execute immediately at the best available current market price. Our goal is to prioritize the likelihood of the execution of trades, rather than use order types that could beneficially impact the price at which your trades are executed. ETF transactions are also subject to the bid-ask spread. Because secondary-market transactions occur at market prices, you may pay more than the value of the underlying securities when you buy ETF Shares and receive less than the underlying securities' value when you sell those shares.

Fractional shares of ETFs can't be bought or sold on the open market. As a result, ETF purchases may lead to residual cash in the Portfolio. 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 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.

Exchange-listed options

VMC routes orders in exchange-listed options to one or more market participants with the objective of obtaining best execution. 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. In the event that you transact options in your Portfolio, VMC may receive payment for order flow separate and apart from the advisory fees assessed by VAI in connection with the Ongoing Service.

Other investment advisors may not require you to direct brokerage transactions through a specified broker-dealer. By directing brokerage transactions to VMC, VAI may be unable to achieve most favorable execution of clients' transactions, and this practice may cost clients more money. The advice provided by the advisor, however, won't take into consideration whether Vanguard or any of its affiliates would receive fees from its recommendation to purchase, hold, or sell non-Vanguard investments.

If you're interested in receiving other brokerage services, VAI may inform you of the availability of such services through VMC but won't recommend broker-dealers.

Review of accounts

This section regarding the review of accounts applies to those clients who have enrolled in the Ongoing Service. VAI doesn't perform ongoing account monitoring or offer account reviews for those clients who only received a Financial Plan and didn't further enroll.

VAI will 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.

Adjusting the asset allocation

VAI may recommend adjusting your asset allocation as your ability to bear risk changes or to account for changes to your investment time horizon, but it won't change the asset allocation based on market conditions. Quarterly, VAI will 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 VAI to recommend or cause the purchase or sale of securities in your Portfolio in order to meet the new target asset allocation.

Rebalancing the Portfolio

If during a quarterly review your Portfolio is found to deviate from the target asset allocation by more than 5% in any asset class, VAI will rebalance your Portfolio within the five-day review period using investment methodologies and strategies consistent with those employed during the implementation of your Financial Plan. Assets contributing to overweighted sub-asset classes will be sold and the proceeds invested in underweighted sub-asset classes in accordance with your Financial Plan.

VAI will 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 Financial Plan 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. In the event your Portfolio is found to deviate 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, if determined appropriate.

Additionally, VAI will use cash flows as an opportunity to adjust your holdings to your target allocation. That is, VAI will invest your contributions or liquidate your withdrawals in a manner that adjusts your overall allocation back to your target allocation, in order to minimize transaction and tax costs. If the contribution or additional proceeds are designated to purchase a new fund and the amount is less than 0.5% of your Portfolio, not to exceed $10,000, then the money will be added to the largest position in the account as long as it's consistent with our investment methodology. If you have residual cash in your Vanguard Brokerage Account at your next rebalancing event and it's not enough to purchase greater than 0.0001 shares of the recommended security, then the cash will continue to be held until the next rebalancing opportunity. Notwithstanding the ability to place reasonable restrictions on your Portfolio, individual investments may be evaluated during a quarterly review and sold in certain cases if determined appropriate by VAI. 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 VAI's investment guidelines and be held pursuant to your Financial Plan may later fall outside VAI's investment guidelines, which could cause VAI to sell the individual security. If VAI recommends a full liquidation with respect to securities held in a Retirement Account and the security being liquidated isn't held in any other account, VAI will notify you at least 30 days before the change is implemented.

As noted earlier, at least annually VAI will contact you to validate your financial planning needs and the strategy chosen for the Portfolio and to determine whether to propose any changes to your Financial Plan. Material changes to your financial situation, investment objectives, or reasonable restrictions may impact your goals or your Financial Plan. If you fail to respond to our attempts to schedule and conduct an annual review, we'll assume that there have been no changes to your financial situation, risk tolerance, tax situation, other assets or sources of income, investment time horizon, investment objectives, planned spending from the Portfolio, or desired reasonable restrictions, and we'll continue implementing your approved Financial Plan.

If there have been any changes to your financial situation, risk tolerance, tax situation, other assets or sources of income, investment time horizon, investment objectives, planned spending from the Portfolio, or desired reasonable restrictions since your last review with an advisor, it's important that you communicate those changes to VAI. If you've notified us of changes to this information, we may recommend a change to the Portfolio's target allocation. Any updates will be evaluated by VAI as soon as reasonably practicable to determine whether VAI should propose any updates or changes to your Financial Plan or Portfolio for your review and approval.

As owners of Vanguard Funds, 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

VAI doesn't receive compensation or other economic benefits from persons other than clients for providing investment advice or advisory services to its clients. VAI doesn't directly or indirectly compensate any person who isn't a supervised person for client referrals.

Custody

Vanguard, the transfer agent of the Vanguard Funds, acts in the capacity of a qualified custodian for those Funds and sends quarterly or more frequent account statements directly to you. Vanguard will also transmit transaction confirmations to you in connection with purchases and sales made in your Vanguard mutual fund account(s).

VMC, a registered broker-dealer, serves as qualified custodian in relation to any Vanguard ETFs, individual securities, third-party mutual funds, or other non-Vanguard securities that clients may invest in. As such, VMC sends out 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). You should carefully review and compare all account statements and reports from Vanguard and VMC with any account information made available by VAI and contact the appropriate entity with any questions.

Investment discretion

In connection with this Ongoing Service, you must approve your Financial Plan and direct VAI to implement the recommended investment strategy for your Portfolio either verbally or in writing (including email and similar electronic communications). VAI will construct and invest your Portfolio in accordance with your approved Financial Plan, including any reasonable restrictions that you may wish to impose on VAI's 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 that it be implemented, VAI will take no action with respect to the assets held in the Portfolio. Within five business days after you approve the Financial Plan, VAI will initiate steps to begin implementing your investment strategy as specified in the Financial Plan, unless you direct VAI to implement the Financial Plan over time.

In implementing the Financial Plan, VAI or its affiliates will 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 oral, written, or online instructions to effect transactions with third parties, at the times and according to the terms established in the Financial Plan. VAI may change the investments used to effect the investment strategy set forth in the Financial Plan at any time and without prior notice to you, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If, however, VAI recommends such a change with respect to securities held in an IRA, VAI will 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 may follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed to be your consent to the proposed change in investments. Your Financial Plan may 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 VAI, you'll grant us the authority to open new accounts, except for new brokerage accounts, with our affiliates for you with identical registrations in order to transfer and segregate securities in the Portfolio. This authority will be exercised by VAI 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 Service or in the event that we need to segregate your investments to support various goals selected by you.

Voting client securities

Upon request, an advisor can provide additional information regarding proxy votes and corporate actions for certain clients enrolled in the Ongoing Service. The information may include details on the security itself, impact on the client's Portfolio, recommended voting by Vanguard or third parties, and a recommendation by the advisor.

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

Financial information

VAI isn't aware of any financial condition that's reasonably likely to impair its ability to meet contractual commitments to you.

Requirements for state-registered advisors

VAI is a federally registered investment advisor.

Investment risks

Equity-specific risks:

Stock market risk is 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.

Nondiversification risk is the chance that a fund's performance may be hurt disproportionately by the poor performance of relatively few securities. A fund is considered nondiversified if it may invest a greater percentage of its assets in the securities of particular issuers as compared with other mutual funds.

Industry concentration risk is the chance that there will be overall problems affecting a particular industry.

Manager risk is the chance that poor security selection or focus on securities in a particular sector, category, or group of companies will cause a fund to underperform relevant benchmarks or other funds with a similar investment objective.

Sector risk is 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. Because 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.

Funds of funds are also subject to manager risk, which is the chance that poor security selection or focus on securities in a particular sector, category, or group of companies will cause one or more of the fund's underlying funds—and, thus, the fund itself—to underperform relevant benchmarks or other funds with a similar investment objective.

Company stock funds concentrate on a single stock and are therefore considered riskier than diversified stock funds.

Index sampling risk is the chance that the securities selected for a fund, in the aggregate, won't provide investment performance matching that of the fund's target index.

Investment style risk is the chance that:

- Returns from large-capitalization stocks will trail returns from the overall stock market. Large-cap stocks tend to go through cycles of doing better—or worse—than other segments of the stock market or the stock market in general.
- Returns from small- and mid-capitalization stocks will trail returns from the overall stock market. Historically, small- and mid-cap stocks have been more volatile in price than the large-cap stocks that dominate the overall market, and they often perform quite differently.

International risk or country/regional risk is 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. Because a fund may invest 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 is the chance that the stocks of companies located in emerging markets will be substantially more volatile, and substantially less liquid, than the stocks of companies located in more developed foreign markets.

Currency risk is 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.

Bond-specific risks:

Call risk is 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 is 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.

Manager risk is the chance that poor security selection will cause a fund to underperform relevant benchmarks or other funds with a similar investment objective.

Credit risk is 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 is 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 is the chance that bond and loan prices overall will decline because of rising interest rates.

State-specific risk is the chance that developments in specific states 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 is 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 is the risk that the currency hedging transactions entered into by a fund may not perfectly offset the fund's foreign currency exposure.