

PROXY  VOTE

# Vanguard Funds' Proxy Statement



## **An important message from Independent Chair Mark Loughridge**

Dear fellow shareholder,

On behalf of the Boards of Trustees, I'm pleased to announce that all U.S.-domiciled Vanguard funds will hold a virtual Joint Special Meeting of Shareholders on February 26, 2025. All shareholders who own shares of a Vanguard fund as of the record date of November 26, 2024, have an opportunity to vote. I urge you to review the proxy materials carefully and then vote online, by mail or phone, or by attending the virtual shareholder meeting.

The purpose of the Proxy Statement is to present a proposal to elect trustees for the Vanguard funds. In selecting trustee candidates, the Boards' Nominating Committee considered a range of capabilities relevant to the funds' operations that the trustees—in the aggregate—must bring to bear in overseeing the funds to ensure they are managed in the best interests of their shareholders. The resulting slate of nominees encompasses 13 individuals with diverse backgrounds and a broad range of experiences. Twelve of the 13 nominees would be independent trustees, and nine of the 12 currently serve as trustees for the funds. Vanguard Chief Executive Officer Salim Ramji is the only Vanguard employee who is a nominee on the slate of trustees. The Boards of Trustees recommend a vote "for" each of the nominees for trustee.

Please read the proxy materials and cast your vote promptly. Your vote is important. Thank you for taking the time to participate in this important process.

Sincerely,



Mark Loughridge  
Independent Chair of the Boards of Trustees  
November 22, 2024

## **Information about Voting**

### **On what am I being asked to vote?**

The Boards are asking shareholders to elect trustees for the Vanguard funds and recommend a vote "For" each of the nominees for trustee.

### **Who gets to vote?**

Any person who owned shares of a U.S.-domiciled Vanguard fund as of the record date of November 26, 2024, even if that person sold those shares after the record date, gets to vote.

### **Why am I being asked to vote?**

As a shareholder, it is your right to vote on certain matters concerning your funds. If many shareholders choose not to vote, the funds might not receive enough votes to reach quorum and conduct the Joint Special Meeting of Shareholders on February 26, 2025 (the "Meeting"). If quorum cannot be reached, the funds will have to adjourn the Meeting and send additional communications to shareholders to try to get more votes—a process that would result in additional costs for the funds and thus for you as a fund shareholder.

### **How will I receive notice and information about the proxy?**

The Vanguard funds have elected to utilize the Securities and Exchange Commission rules that allow the funds to furnish proxy materials to their shareholders by providing notice of and access to these documents online instead of mailing printed copies (commonly referred to as "notice and access").

Please note that one copy of this Proxy Statement or Notice Regarding the Availability of Proxy Materials may be delivered to two or more shareholders of a fund who share an address, unless the fund has received instructions to the contrary. To request a separate copy of this Proxy Statement or Notice Regarding the Availability of Proxy Materials, or for instructions on how to request a separate copy of such documents or how to request a single copy if multiple copies of such documents are received, shareholders should contact the appropriate fund at the address and phone number provided in this Proxy Statement.

You will receive proxy information in one of the following ways based on your document delivery preferences:

- If you have previously elected to receive fund materials by email, a link to view this Proxy Statement and the accompanying proxy materials is expected to be sent to the email address on file on or about December 3, 2024.
- If you have previously elected to receive fund materials by mail, a Notice Regarding the Availability of Proxy Materials (the "Notice") is expected to be mailed to the address on file on or about November 27, 2024. The Notice will include instructions on how to request this Proxy Statement and accompanying proxy materials.
- For certain shareholders holding their shares through intermediaries that are set to receive paper proxy materials by mail, this Proxy Statement and related proxy materials are expected to be mailed to the address on file on or about November 27, 2024.

### How do I vote?

You can vote your shares using one of the following methods:

- **Online**, by visiting the website provided on your proxy card, voting instruction card, voting instruction form, or Notice.
- **By phone**, by calling the toll-free phone number on your proxy card, voting instruction card, voting instruction form, or on the website provided on the Notice.
- **By mail**, if you have requested a full set of paper proxy materials, by signing and dating the enclosed proxy card, voting instruction card, or voting instruction form.
- **By attending the virtual Meeting**, which is to be held on Wednesday, February 26, 2025, at 8:00 a.m., Eastern Time.

### **You are urged to vote as soon as possible to ensure that the funds receive enough votes to reach quorum, which is required to hold the Meeting.**

You are encouraged to vote online or by phone using the voting control number that appears on your proxy card, voting instruction card, or voting instruction form. Votes may also be submitted during the Meeting. In most instances, shareholders may vote up until voting closes at the Meeting. If your shares are held through a brokerage account, bank, or other holder of record (each, an "intermediary"), your intermediary may request that voting instructions are received in advance of the Meeting and provide additional information related to voting. All shares represented by valid proxies received

on a timely basis prior to the tallying of the votes at the Meeting, regardless of the way they were provided, will be voted. Please contact your intermediary for additional information related to voting.

### **How do I sign the proxy card, voting instruction card, or voting instruction form if I am voting by mail?**

If you have requested a full set of paper proxy materials to vote by mail, you must sign your name exactly as it appears on the enclosed proxy card, voting instruction card, or voting instruction form. Unless your account preferences provide alternative instructions, either owner of a joint account may sign the card or form, but the signature must match the name exactly as it appears on the card or form.

### **Who is Computershare Fund Services?**

Computershare Fund Services ("Computershare") is a third-party proxy vendor that has been hired to solicit shareholders and collect and tabulate proxy votes.

### **How do I access and participate in the virtual Meeting?**

The Meeting will be held in a virtual format only. You will not be able to attend the Meeting in person. You are invited to attend the Meeting by visiting <https://meetnow.global/MW4PNCM>. You will be required to enter the voting control number found on the proxy card, voting instruction card, voting instruction form, or the Notice you received. If you have lost or misplaced your voting control number, please email Computershare at [shareholdermeetings@computershare.com](mailto:shareholdermeetings@computershare.com) (include your full name, street address, city, state, and zip code) to verify your identity and obtain your voting control number.

The Meeting will begin promptly at 8:00 a.m., Eastern Time, on Wednesday, February 26, 2025. You are asked to access the Meeting prior to the start time to leave ample time for check-in.

If your shares are held through an intermediary, such as a brokerage account, bank, or other holder of record, you will need to request a legal proxy from the intermediary ("Legal Proxy") to receive access to the Meeting, which serves as proof of your proxy power and reflects your holdings. You must submit the Legal Proxy along with your name and email address to Computershare. Requests for registration must be labeled as "Legal Proxy" and be received no later than February 21, 2025, 5:00 p.m., Eastern Time. You will receive a confirmation of your registration by email that includes the

voting control number necessary to access and vote at the Meeting. Requests for registration should be directed to Computershare at [shareholdermeetings@computershare.com](mailto:shareholdermeetings@computershare.com).

During the Meeting, shareholders will have an opportunity to submit questions and comments via a moderated chat function. The chat will not be visible to other attendees and will be monitored for questions and comments that relate directly to the proposal included in this Proxy Statement. The submission of questions and comments does not guarantee that any of them will be addressed during the Meeting. For questions related to participation at the virtual Meeting, please call Computershare toll-free at 866-643-5201. For technical support, please call Computershare technical support toll-free at 888-724-2416.

## The Vanguard Funds<sup>1</sup>

### Important Notice Regarding the Availability of Proxy Materials for the Special Meeting of Shareholders To Be Held on February 26, 2025

The Vanguard funds will host a virtual Joint Special Meeting of Shareholders on Wednesday, February 26, 2025, at 8:00 a.m., Eastern Time (the "Meeting"). The Meeting will be accessible solely by means of remote audio communication. Shareholders will not be able to attend the Meeting in person. The purpose of the Meeting is to consider and act upon the following proposal and to transact such other business as may properly come before the Meeting, or any adjournments thereof.

**Proposal:** Elect trustees for each fund.

The Board of Trustees that oversees each fund has fixed the close of business on November 26, 2024, as the record date for the determination of those shareholders entitled to receive notice of, and to vote at, the Meeting or any adjournment or postponement of the Meeting. While the proposal relates to all Vanguard funds, shareholders may only cast votes by proxy or at the Meeting for shares of the funds that they own as of the record date.

By Order of the Boards of Trustees,

Tonya T. Robinson  
Secretary  
November 22, 2024

### YOUR VOTE IS IMPORTANT

You can vote easily and quickly online, by phone, or, if you have requested paper proxy materials, by mail. Just follow the instructions that appear in your proxy materials.

<sup>1</sup> Please see Part V of this Proxy Statement for an alphabetical list of all Vanguard funds.

## The Vanguard Funds

### Joint Special Meeting of Shareholders on February 26, 2025

#### Proxy Statement

##### Introduction

This combined Proxy Statement is being provided to you on behalf of the Board of Trustees of each Vanguard fund (each, a “Board,” collectively, the “Boards”). This Proxy Statement is divided into six main parts:

- Part I** An Overview of the Proposal begins on page **1**.
- Part II** Details on the Proposal begins on page **1**.
- Part III** Information on the Funds’ Independent Accountants begins on page **8**.
- Part IV** More on Proxy Voting and the Shareholder Meeting begins on page **9**.
- Part V** Investment Advisors and Funds Information begins on page **12**.
- Part VI** Exhibits begins on page **72**.

Please read this Proxy Statement before voting on the proposal. If you have questions about this Proxy Statement, or if you would like additional information, please call Computershare toll-free at 866-643-5201.

Shareholders will receive either an email with a link to access the proxy materials, which is expected to be sent on or about December 3, 2024, or a mailing containing a Notice Regarding the Availability of Proxy Materials (the “Notice”), which is expected to be mailed on or about November 27, 2024.

Shareholders who receive an email link can use it to view the proxy materials online, vote their shares, request paper proxy materials at no charge, and/or set delivery preferences for future meetings. Shareholders who receive the Notice can view the proxy materials online at <https://www.proxy-direct.com/vanguard/materials> to vote their shares and/or set delivery preferences for future meetings, or may use the instructions on the Notice to request paper proxy materials at no charge.

Any request for paper proxy materials will be mailed via first class mail or by other reasonably prompt means to the address on file at no cost within three business days of receipt of the request. For certain shareholders holding their shares through intermediaries that are set to receive proxy materials by mail, this Proxy Statement and related proxy materials are expected to be mailed on or about November 27, 2024.

**Annual and Semiannual Reports.** Each fund’s most recent annual and semiannual reports to shareholders are available at no cost. You may read, print, or request mail delivery of a copy through the fund’s website at <https://vgi.vg/fund-literature>. You may also request a report, which will be furnished free of charge, by phone by calling toll-free at 800-662-7447 or in writing by sending a request to P.O. Box 2600, Valley Forge, PA 19482-2600. Participants in an employer-sponsored 401(k) or other retirement plan administered by The Vanguard Group, Inc. (“Vanguard”), may request a report by phone by calling toll-free at 800-523-1188.

#### **ATTENTION: Vanguard Variable Insurance Funds Shareholders**

You have the right to instruct your annuity provider how to vote the Vanguard Variable Insurance Funds shares held through your variable insurance contract or policy. You can issue voting instructions for these shares online or by phone, or by mail if you request paper proxy materials, by following the instructions that appear in your proxy materials. Note that your annuity provider will “shadow vote” any fund shares for which contract owners fail to provide voting instructions, which means that the uninstructed shares will be voted in proportionately the same manner—“For,” “Against,” or “Abstain”—as the instructed shares. As a result, those contract owners who provide voting instructions may control the outcome of a vote even though their actual interest in a fund alone would not be sufficient to approve the applicable proposal. Contract owners should contact their annuity provider for information about any applicable deadline for providing voting instructions to such annuity provider.

## PART I

### An Overview of the Proposal

Shareholders of the Vanguard funds are being asked to vote on the proposal set forth below. Only shareholders of record on November 26, 2024, are entitled to vote on the proposal.

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#### VANGUARD PROPOSAL

##### **Elect trustees for each fund.**

Applies to all Vanguard funds.

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## PART II

### Details on the Proposal

#### **Proposal**

##### **Elect trustees for each fund.**

This proposal applies to all Vanguard funds.

The Boards are asking shareholders of each Vanguard fund to elect the proposed nominees listed below to the Boards.

#### **Who are the nominees to the Boards?**

The 13 individuals listed below have been approved by the Boards for election as trustees of the Vanguard funds by the funds' shareholders. Effective upon their election, the trustees would serve together as the Boards for all Vanguard funds. Ms. Bunch, Mr. Loughridge, Mr. Malpass, Mr. Pastor, Mr. Perold, Ms. Raskin, Mr. Reid, Dr. Thomas, and Mr. Volanakis currently serve as trustees for all Vanguard funds and are included in this slate of nominees. Mr. Loughridge, Mr. Malpass, Mr. Perold, Ms. Raskin, and Mr. Volanakis were previously elected by the shareholders of the Vanguard funds in 2017. Ms. Bunch, Mr. Pastor, Mr. Reid, and Dr. Thomas were previously appointed to the Boards following recommendations by the Nominating Committees of the Boards, but not elected by shareholders. Mr. Murphy, Ms. Patterson, Mr. Ramji, and Ms. Venneman have not previously served as trustees of the Vanguard funds and are included in this slate of nominees for trustee for the Vanguard funds. Mr. Murphy, Ms. Patterson, and Ms. Venneman were initially identified during a search process for potential nominees by the Nominating Committees with the assistance of a third-party search firm and were recommended for consideration as nominees by the Nominating Committees. Mr. Ramji was also recommended for consideration as a nominee by the Nominating Committees and such recommendation was approved by the Boards. Each nominee was approved by the Boards for election by shareholders. All nominees have consented to being named in this Proxy Statement and have agreed to serve if elected. Each nominee, except for Ms. Patterson and Ms. Venneman, currently serves as a director of Vanguard. Ms. Patterson and Ms. Venneman have been appointed as directors of Vanguard effective as of February 26, 2025. The mailing address of the Vanguard funds' trustees and officers is The Vanguard Group, Inc., P.O. Box 876, Valley Forge, PA 19482.

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## Nominees<sup>2</sup>

### INTERESTED TRUSTEE

#### **Salim Ramji<sup>3</sup>**

Born 1970

Mr. Ramji is chief executive officer of Vanguard, a member of the Vanguard Board of Directors, and chief executive officer and president of the funds. Mr. Ramji brings more than 25 years of financial services experience and leadership in the world of index investing to the Vanguard funds' Boards. Prior to joining Vanguard in July 2024, he served in a variety of leadership roles over the past 25 years spanning investments, capital markets, and wealth management. Most recently, he was the global head of iShares and index investments at BlackRock and a member of the global executive committee. Previously, he was a senior partner at McKinsey & Company, where he led the asset and wealth management practice areas. Mr. Ramji started his career as a lawyer with Clifford Chance in London and Hong Kong. He is a trustee of Graham Windham, a New York-based child-welfare organization, and serves on the international leadership council for the University of Toronto. The Vanguard funds' Boards will benefit from his strong alignment to Vanguard's mission, global perspective, and deep expertise in investments, capital markets, and wealth management.

### INDEPENDENT TRUSTEES

#### **Tara Bunch**

Born 1962

Ms. Bunch brings many years of executive leadership focused on client experience, including experience leading technological change and overseeing complex global digital platforms, to the Vanguard funds' Boards. She is head of global operations at Airbnb, Inc., where she oversees community support, trust and safety, and payments for hosts and guests in 220 countries and regions, and a member of the boards of the University of California's Berkeley School of Engineering and Santa Clara University's School of Business. She is the former vice president of AppleCare at Apple Inc. (2012–20). Ms. Bunch joined the Vanguard funds' Boards in 2021 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from her extensive experience and expertise in technology and global operations.

#### **Mark Loughridge**

Born 1953

Mr. Loughridge brings decades of global senior executive leadership experience in areas such as finance, technology, and risk management to the Vanguard funds' Boards. He is the former senior vice president and chief financial officer (retired 2013) of IBM (information technology services). He also served as a fiduciary member of IBM's Retirement Plan Committee (2004–13). Other previous positions held by Mr. Loughridge at IBM include senior vice president and general manager of Global Financing (2002–04) and vice president and controller (1998–2002). Mr. Loughridge joined the Vanguard funds' Boards in 2012 and he serves as the independent chair of the Vanguard Board of Directors. His extensive experience and many years of service to the Vanguard funds resulted in his appointment as independent chair of the Vanguard funds' Boards by his fellow trustees. The Vanguard funds' Boards will continue to benefit from his expertise in executive leadership, finance, and risk management.

#### **Scott C. Malpass**

Born 1962

Mr. Malpass brings significant expertise in investment and asset management to the Vanguard funds' Boards. He is the co-founder and a managing partner at Grafton Street Partners (investment advisory firm). He serves as chair of the board of Catholic Investment Services, Inc. (investment advisor), a member of the board of superintendence of the Institute for the Works of Religion in Vatican City, and director of Paxos Trust Company (finance). He was also chief investment officer (1989–2020) and vice president (1996–2020) of the University of Notre Dame. Mr. Malpass joined the Vanguard funds' Boards in 2012 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his more than three decades of experience leading a large university endowment and extensive knowledge of Vanguard funds.

#### **John Murphy**

Born 1962

Mr. Murphy brings decades of experience in business, financial, and operational leadership to the Vanguard funds' Boards, including oversight of global finance and business operations outside of the United States. He is

<sup>2</sup> If elected by the funds' shareholders, the trustees will assume their positions immediately after the Meeting.

<sup>3</sup> If elected by the funds' shareholders, Mr. Ramji will be considered an "interested person," as defined in the Investment Company Act of 1940, because he is the chief executive officer of Vanguard and the chief executive officer and president of the funds.



president and chief financial officer of The Coca-Cola Company. Since joining the company in 1988, Mr. Murphy has held a variety of management, finance, and strategic planning roles across the globe. He is also a member of the boards of Mexico-based Coca-Cola FEMSA, The Coca-Cola Foundation, and Engage, a collaborative innovation and corporate venture platform that supports startups, as well as a member of the board of trustees of the Woodruff Arts Center. Mr. Murphy joined the Vanguard Board of Directors in 2024. The Vanguard funds' Boards will benefit from his deep finance and accounting expertise and experience with board-level financial reporting.

### **Lubos Pastor**

Born 1974

Mr. Pastor is a leading scholar who brings deep expertise in financial markets, investment management, and indexing to the Vanguard funds' Boards. He is the Charles P. McQuaid Distinguished Service Professor of Finance at the University of Chicago Booth School of Business. He also serves as vice president of the European Finance Association, a research associate at the National Bureau of Economic Research, and a research fellow at the Centre for Economic Policy and Research. He is a member of the board of the Fama-Miller Center for Research in Finance and a member of the Center for Research in Security Prices (CRSP) Index Advisory Council and Advisory Board. He also serves as managing director of Andersen (professional services) and a member of the Advisory Board of the Andersen Institute for Finance and Economics. Mr. Pastor joined the Vanguard funds' Boards in 2024 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his unique, multi-disciplinary perspective and expertise in financial markets and investment management.

### **Rebecca Patterson**

Born 1968

Ms. Patterson is a globally recognized investor and macroeconomic researcher who brings more than 25 years of experience studying how politics and policy intersect with economic trends to drive financial markets to the Vanguard funds' Boards. Most recently, she served as chief investment strategist at Bridgewater Associates LP, where she helped shape the firm's agenda for researching and building systematic strategies across various geographies and asset classes. Previously, Ms. Patterson served as chief investment officer at Bessemer Trust. She is a member of the Council on Foreign Relations and the Economic Club of New York, has served on the New York Federal Reserve's Investor Advisory and Foreign Exchange committees, and chairs the Council for Economic Education, which focuses on K-12 financial literacy. The Vanguard funds' Boards will benefit from

her expertise in investment strategy, particularly in managing large global portfolios, and her knowledge regarding the interrelatedness of politics, public policy, and economics.

### **André F. Perold**

Born 1952

Mr. Perold brings substantial investment experience to the Vanguard funds' Boards from both academia and the private sector. He is the chief investment officer and a partner of HighVista Strategies LLC (private investment firm). He is also an emeritus George Gund Professor of Finance and Banking at Harvard Business School. In addition, he serves as a member of the board of RIT Capital Partners (investment firm). Mr. Perold joined the Vanguard funds' Boards in 2004 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his considerable financial expertise, knowledge of the Vanguard funds, and extensive service on the Vanguard funds' Boards.

### **Sarah Bloom Raskin**

Born 1961

Ms. Raskin brings extensive experience in government, at both the federal and state levels, and academia to the Vanguard funds' Boards. She has served as deputy secretary of the U.S. Department of the Treasury (2014–17), governor of the Federal Reserve Board (2010–14), and commissioner of financial regulation for the State of Maryland (2007–10). She is currently the Colin W. Brown Distinguished Professor of the Practice at Duke Law School and a senior fellow at the Duke Center on Risk. She was also a Rubenstein fellow at Duke University (2017–20) and distinguished fellow at Duke Law's Global Financial Markets Center (2020–22). Ms. Raskin is a partner of Kaya Partners (climate policy advisory services). Ms. Raskin joined the Vanguard funds' Boards in 2018 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from her experience and expertise in financial markets, financial regulation, law, and risk oversight.

### **Grant Reid**

Born 1959

Mr. Reid brings decades of expertise in effective business transformation, growth strategy, and technology-driven innovation in consumer goods and hospitality to the Vanguard funds' Boards. He serves as senior operating partner of CVC Capital (alternate investment manager), a member of the board of the Sustainable Markets Initiative (environmental services) and chair of its Agribusiness Task Force, and a member of the board of Marriott International, Inc. He is the former chief executive officer and president



(2014–22) and a former member of the board of directors (2015–22) of Mars, Incorporated (multinational manufacturer). Mr. Reid joined the Vanguard funds' Boards in 2023 and serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his extensive experience and expertise in business strategy and operations.

### **David Thomas**

Born 1956

Dr. Thomas brings extensive experience in organizational and academic leadership, operations management, and talent development to the Vanguard funds' Boards. He is the president of Morehouse College and has more than 30 years of higher education leadership experience. He is an emeritus professor of business administration at Harvard University and former dean and professor of management at Georgetown University's McDonough School of Business. Dr. Thomas also serves as a director of DTE Energy Company and trustee of Commonfund. His research and published works on managing diversity in the workplace are nationally renowned and he has worked as a consultant for Fortune 500 companies, as well as major governmental and nonprofit organizations, for more than three decades on issues relating to organizational change and diversity and inclusion. Dr. Thomas joined the Vanguard funds' Boards in 2021 and he serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his extensive experience and expertise in organizational leadership and management.

### **Barbara Venneman**

Born 1964

Ms. Venneman brings experience working across industries and geographies, advising on digital disruption, where the market is going, high-impact innovations, and ways to implement complex change management, to the Vanguard funds' Boards. Ms. Venneman retired from Deloitte Consulting LLP in 2024, where she served as the global head of Deloitte Digital and as a member of the Deloitte Global Consulting Executive Committee. She worked with big tech and emerging tech companies to accelerate market innovation and adoption using leading technologies such as digital, artificial intelligence (AI)/generative AI, cloud, and cybersecurity. She serves on the nonprofit board of Reality Changers, which prepares students to become first-generation college graduates. The Vanguard funds' Boards will benefit from her extensive experience and expertise in executive leadership, guiding large global companies through complex business transformations, and enterprise and digital technology.

### **Peter F. Volanakis**

Born 1955

Mr. Volanakis brings expertise in technology, innovation, and global operations across various industries to the Vanguard funds' Boards. He is the former president and chief operating officer (retired 2010) of Corning Incorporated (communications equipment) and director of Corning Incorporated (2000–10) and Dow Corning (2001–10). He also served as director (2012) of SPX Corporation (multi-industry manufacturing), director (2018–20) of Hypertherm Corporation (industrial manufacturing), and director (2011–14) of Avantor AS (life sciences). He was also an overseer of the Amos Tuck School of Business Administration at Dartmouth College (2001–13) and chairman of the board of trustees of Colby-Sawyer College (2013–22). He is a member of the BMW Group Mobility Council. Mr. Volanakis joined the Vanguard funds' Boards in 2009 and he serves on the Vanguard Board of Directors. The Vanguard funds' Boards will continue to benefit from his extensive experience and expertise in executive and board leadership.

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### **How many of the nominees will be "independent" trustees if elected?**

If elected by shareholders, twelve of the 13 nominees, all but Mr. Ramji, will be independent trustees, as that term is defined under applicable federal securities laws. Independent trustees are not employees of Vanguard. Independent trustees play a critical role in overseeing fund operations and representing the interests of each fund's shareholders. Trustees' independence from the funds enhances their service on the Vanguard funds' Boards and their committees.

### **How are the Boards of the Vanguard funds structured?**

The Vanguard funds are grouped into 35 separate trusts, and each trust is governed by a Board. Each of these trusts is made up of one or more Vanguard funds, which are sometimes called "series" of the trust. Trustees are elected collectively by the shareholders of each of the Vanguard funds within the trust. The same individuals currently serve as trustees for all Vanguard funds, commonly referred to as a "unitary board." A unitary board is beneficial because each fund has trustees who serve on the Boards of the other Vanguard funds. The trustees develop greater familiarity with operations that are common to all Vanguard funds and can address common issues consistently and efficiently. The unitary board also avoids substantial additional costs, administrative complexities, and redundancies that would result from having a different Board for every Vanguard fund. While there are many areas of common interest among the funds, the trustees recognize

that they are responsible for exercising their responsibilities at all times on a fund-by-fund basis. Part V of this Proxy Statement includes an alphabetical list of the Vanguard funds, identifies the trust of which each fund is a series, and provides additional information about the funds.

#### **What is the Board's leadership structure?**

The trustees have elected Mr. Loughridge as the independent chair of the Board. The independent chair is a spokesperson and principal point of contact for the trustees and is responsible for coordinating the activities of the trustees, including calling regular executive sessions of the trustees, developing the agenda of each meeting together with Vanguard's chief executive officer, and chairing the meetings of the trustees. An independent trustee also chairs the meetings of the Audit, Compensation, Nominating, and Independent Governance Committees.

#### **How long will each trustee serve?**

If elected, each trustee will serve until he or she resigns, retires (typically by age 75), or is removed from the Board pursuant to the funds' governing documents.

#### **What are the Board's responsibilities?**

The primary responsibility of the Board of each fund is to oversee the management of the fund for the benefit of its shareholders. Each fund's Board has a supermajority of independent trustees who are not "interested persons" of the fund. Mr. Ramji would be the only interested trustee on the funds' Boards. The independent trustees bring a broad range of relevant backgrounds, experiences, and skills to the Boards, particularly in matters critical to the funds and their shareholders. In exercising their oversight responsibilities, the funds' trustees focus on matters they determine to be important to fund shareholders, which includes the management, performance, and risk management of the funds, as well as the approval of arrangements with material service providers.

#### **What is the Board's role in risk oversight?**

The trustees play an active role, as a Board and at the committee level, in overseeing risk management for each fund. The trustees delegate the day-to-day risk management of the funds to various groups within Vanguard, including portfolio review, investment management, risk management, compliance, legal, fund accounting, and fund services and oversight. These groups provide the trustees with regular reports

regarding investment, valuation, liquidity, and compliance, as well as the risks associated with each. The trustees also oversee risk management for the funds through regular interactions with the funds' internal and external auditors.

The Boards participate in the funds' risk oversight, in part, through the Vanguard funds' compliance program, which covers the following broad areas of compliance: investment and other operations; recordkeeping; valuation and pricing; communications and disclosure; reporting and accounting; oversight of service providers; fund governance; and code of ethics, insider trading controls, and protection of nonpublic information. The funds' chief compliance officer regularly provides reports to the Boards in writing and in person.

#### **What are the Board's committees?**

The Board of each fund has five standing committees. All committees are composed exclusively of independent trustees.

- **Audit Committee.** This committee oversees the accounting and financial reporting policies, the systems of internal controls, and the independent audits of each fund. The following independent trustees serve as members of the committee: Mr. F. Joseph Loughrey,<sup>4</sup> Mr. Loughridge, Ms. Raskin, and Mr. Volanakis.
- **Compensation Committee.** This committee oversees the compensation programs established by each fund for the benefit of its trustees. The following independent trustees serve as members of the committee: Ms. Bunch, Mr. Loughrey, Mr. Loughridge, Mr. Malpass, and Mr. Reid.
- **Independent Governance Committee.** This committee assists each Board in fulfilling its responsibilities and is empowered to exercise Board powers in the intervals between Board meetings unless such action is prohibited by applicable law or fund bylaws. The following independent trustees serve as members of the committee: Mr. Emerson Fullwood,<sup>5</sup> Mr. Loughridge, Mr. Pastor, Mr. Perold, Ms. Raskin, and Mr. Volanakis.
- **Investment Committees.** These committees assist each Board in its oversight responsibility for the investment performance and practices of the funds and their investment advisors. The committees assist each Board in the review and evaluation of materials related to each Board's consideration of investment advisory agreements with the funds. Each trustee serves on one of two investment committees.

<sup>4</sup> Mr. F. Joseph Loughrey, a trustee since 2009, is retiring from Board service after the Meeting and is not standing for reelection.

<sup>5</sup> Mr. Emerson Fullwood, a trustee since 2008, is retiring from Board service after the Meeting and is not standing for reelection.

- **Nominating Committee.** This committee nominates candidates for election to the Board of each fund. The committee also has the authority to recommend the removal of any trustee. The following independent trustees serve as members of the committee: Ms. Bunch, Mr. Fullwood, Mr. Loughridge, Mr. Malpass, and Dr. Thomas. The Nominating Committee Charter effective at the time the nominees for trustee were selected is included as Exhibit A of Part VI of this Proxy Statement.

#### **How often did the Boards and each standing committee meet during each trust's most recently completed fiscal year?**

Information related to the number of Boards and committee meetings is included as Exhibit B of Part VI of this Proxy Statement.

All trustees attended at least 75% of the aggregate of the total meetings of the Boards and committees on which they serve.

#### **How are nominees for trustee selected?**

The independent trustees who serve on the Nominating Committee nominate candidates for election to the Board of each fund. The Boards approve the slate of nominees that is recommended by the Nominating Committee for election by shareholders. The committee considers shareholder recommendations for trustee nominees, which can be sent to Mr. Loughridge, independent chair of the committee. All candidates recommended to the committee are evaluated in the same manner regardless of how the candidates are recommended.

#### **What factors are considered when selecting nominees?**

In determining whether an individual is qualified to serve as a trustee of the funds, the Nominating Committee and each fund's Board consider a wide variety of information about a candidate, and multiple factors contribute to each nomination. The Nominating Committee and each fund's Board consider, among other things, a candidate's integrity, strength of character, judgment, business experience, specific areas of expertise, length of tenure, ability to devote sufficient time to attendance at and preparation for Board meetings, factors relating to the composition of the Boards (including their size and structure), and principles of diversity. Each nominee is determined to have the requisite experience, skills, and attributes necessary to serve the funds and their shareholders. Each nominee also demonstrates a track record of substantial professional accomplishment and an exceptional ability

to consider complex business and financial matters, evaluate the relative importance and priority of issues, make decisions, and contribute effectively to the deliberations of each fund's Board.

#### **Why are the funds' shareholders being asked to elect trustees?**

Electing trustees enables the funds to avoid costly proxy solicitations and shareholder meetings for each new trustee appointment. Federal law permits fund boards to appoint new trustees as needed, provided at least two-thirds of the board members have been elected by shareholders.

#### **What happens if the nominees are not elected by shareholders?**

If shareholders fail to elect one or more of the nominees, then the Boards will take such further action as deemed to be in the best interests of the funds' shareholders.

#### **How are the trustees compensated?**

Each fund (other than Vanguard Market Liquidity Fund, Vanguard Municipal Low Duration Fund, and Vanguard's funds of funds) pays its proportionate share of the independent trustees' compensation.<sup>6</sup> Mr. Ramji, who will be an interested trustee if elected, will receive no compensation from the funds. The funds compensate their independent trustees through payment of an annual fee for their service to the funds. The independent trustees are also reimbursed for travel and other related expenses that they incur in attending Board meetings.

#### **Trustee Compensation**

Information related to the total amount paid as compensation by each Vanguard trust to each trustee during the trust's most recently completed fiscal year and the total amount of compensation paid to each trustee by all Vanguard funds as of the 12-month period ended October 31, 2024, is included as Exhibit C of Part VI of this Proxy Statement.

#### **Do nominees for trustee own shares of the funds?**

The nominees for trustee invest in the Vanguard funds according to their own investment needs. Please see Part V of this Proxy Statement for information on the dollar range of fund shares owned by each nominee for trustee for each fund.

<sup>6</sup> The trustees of Vanguard Market Liquidity Fund and Vanguard Municipal Low Duration Fund receive no compensation directly from those funds, but Vanguard is responsible for paying the trustees for their service. The trustees of Vanguard's funds of funds receive no compensation from those funds.

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### Who are the funds' officers?

All Vanguard funds employ their officers on a shared basis. Officers are considered "interested persons" of the funds. In addition to Mr. Ramji, chief executive officer of Vanguard and chief executive officer and president of the funds, they are as follows:

#### OFFICERS<sup>7</sup>

##### **Jacqueline Angell**

Born 1974

Chief Compliance Officer

Principal of Vanguard. Chief compliance officer (2022–present) of Vanguard and of each of the investment companies served by Vanguard. Chief compliance officer (2018–22) and deputy chief compliance officer (2017–19) of State Street.

##### **Christine Buchanan**

Born 1970

Chief Financial Officer

Principal of Vanguard. Chief financial officer (2021–present) and treasurer (2017–21) of each of the investment companies served by Vanguard.

##### **Gregory Davis**

Born 1970

Vice President

Vice president of each of the investment companies served by Vanguard (July 2024–present). President (February 2024–present) and director (July 2024–present) of Vanguard. Chief investment officer (2017–present) of Vanguard. Principal (2014–present) of Vanguard.

##### **John Galloway**

Born 1973

Investment Stewardship Officer

Principal of Vanguard. Investment stewardship officer (2020–present) of each of the investment companies served by Vanguard. Head of Investor Advocacy (2020–present) and head of Marketing Strategy and Planning (2017–20) at Vanguard.

##### **Ashley Grim**

Born 1984

Treasurer

Treasurer (2022–present) of each of the investment companies served by Vanguard. Fund transfer agent controller (2019–22) and director of Audit Services (2017–19) at Vanguard.

##### **Jodi Miller**

Born 1980

Finance Director

Principal of Vanguard. Finance director (2022–present) of each of the investment companies served by Vanguard. Head of Enterprise Investment Services (2020–present), head of Retail Client Services & Operations (2020–22), and head of Retail Strategic Support (2018–20) at Vanguard.

##### **Michael Rollings**

Born 1963

Finance Director

Finance director (2017–present) and treasurer (2017) of each of the investment companies served by Vanguard. Managing director (2016–present) of Vanguard. Chief financial officer (2016–present) of Vanguard. Director (2016–present) of Vanguard Marketing Corporation.

##### **Tonya Robinson**

Born 1970

Secretary

General counsel of Vanguard (October 2024–present). Secretary (October 2024–present) of Vanguard and of each of the investment companies served by Vanguard. Managing director (October 2024–present) of Vanguard. General counsel (2017–24) and vice chair for Legal, Regulatory and Compliance (2019–24) at KPMG LLP.

**EACH FUND'S BOARD OF TRUSTEES RECOMMENDS THAT YOU VOTE "FOR" EACH OF THE NOMINEES.**

<sup>7</sup> Fund officers receive no compensation from the funds and are employees of Vanguard.

## PART III

### Information on the Funds' Independent Accountants

#### Selection of PricewaterhouseCoopers as Independent Registered Public Accountants

The Audit Committee of each Vanguard fund has appointed, and the independent trustees have ratified, PricewaterhouseCoopers LLP ("PwC") as independent registered public accountants to audit the funds' financial statements. Representatives of PwC are not expected to be present at the Meeting or available to make a statement or respond to any shareholders' questions.

In addition to serving as independent registered public accountants, PwC has provided limited non-audit services to both the Vanguard funds and Vanguard. The Audit Committee carefully considered these non-audit services when evaluating PwC's independence for purposes of its appointment as the funds' independent registered public accountants. PwC, in accordance with Public Company Accounting Oversight Board rules, has confirmed to the Audit Committee of the Vanguard funds its status as independent registered public accountants with respect to the Vanguard funds within the meaning of the federal securities laws.

The Audit Committee preapproves all audit and non-audit services provided by PwC to: (1) the Vanguard funds and (2) Vanguard, or any entity controlled by Vanguard that provides ongoing services to the Vanguard funds. All services provided to Vanguard entities by the independent auditor, whether or not they are subject to preapproval, must be disclosed to the Audit Committee. No percentage of PwC's fees or services were approved pursuant to the waiver provision of paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X. The chair of the Audit Committee may preapprove any permissible audit and non-audit services as long as ratification of any preapproval is sought from the full Audit Committee at the next scheduled meeting of the committee. The Audit Committee has determined that the provision of all non-audit services to the trusts, Vanguard, or any entity controlling, controlled by, or under common control of Vanguard, was consistent with maintaining PwC's independence. The Audit Committee considered representations from PwC, in accordance with Public Company Accounting Oversight Board rules, in reaching its determination.

#### Audit Fees

The Vanguard funds are organized under 35 separate trusts,<sup>8</sup> each of which paid PwC the approximate amount shown in the table in Exhibit D of Part VI of this Proxy Statement as audit fees for the trust's two most recently completed fiscal years. Audit fees are fees incurred by PwC for the audit of each trust's annual financial statements or services that are normally provided by PwC in connection with statutory and regulatory filings or engagements during a fiscal year.

#### Audit-Related Fees

Each trust paid PwC the approximate amount shown in the table in Exhibit D of Part VI of this Proxy Statement as audit-related fees for the trust's two most recently completed fiscal years. Audit-related fees may be incurred by PwC in connection with assurance and related services provided to the trusts, Vanguard, or any entity controlling, controlled by, or under common control of Vanguard.

#### Tax Fees

Each trust paid PwC the approximate amount shown in the table in Exhibit D of Part VI of this Proxy Statement as tax fees for the trust's two most recently completed fiscal years. Tax fees may be incurred by PwC in connection with tax compliance, planning, and advice services provided to the trusts, Vanguard, or any entity controlling, controlled by, or under common control of Vanguard.

#### All Other Fees

Each trust paid PwC the approximate amount shown in the table in Exhibit D of Part VI of this Proxy Statement as other fees for the trust's two most recently completed fiscal years. Other fees may be incurred by PwC in connection with services other than audit, audit-related, and tax services provided to the trusts, Vanguard, or any entity controlling, controlled by, or under common control of Vanguard.

<sup>8</sup> Please refer to Part V of this Proxy Statement for the name of the trust of which each Vanguard fund is a series.

## **Aggregate Non-Audit Fees**

Exhibit D of Part VI of this Proxy Statement shows aggregate fees paid to PwC for non-audit services provided to the Vanguard funds, Vanguard, and certain of Vanguard's affiliates for each of the two most recently completed fiscal year-ends for each trust. These amounts include attestation reporting services in connection with service organization controls reporting and other attestation services (e.g., custody rule); reporting over transfer agent operations; defined contribution recordkeeping, pension payroll payment services, and related information technology environment; Personal Advisor Services; and regulatory compliance. Other non-audit services also include tax compliance and advisory services. No Vanguard entity paid any fees to PwC for the design or implementation of financial information systems.

## **PART IV**

### **More on Proxy Voting and the Shareholder Meeting**

#### **Votes Needed to Elect Trustees**

Shareholders of funds that are part of the same trust will elect their trustees on a joint basis. (A list of funds and the trust of which each fund is a series is included in Part V of this Proxy Statement.) For each trust, the 13 nominees for trustee receiving the highest number of affirmative votes cast at the Meeting will be elected.

#### **Proxy Solicitation Methods**

The funds will solicit shareholder proxies in a variety of ways. All shareholders who are entitled to vote will receive these proxy materials electronically, in paper, or by a Notice by mail depending on the shareholder's delivery preferences. Computershare has been engaged to assist in the solicitation of proxies for the Meeting. In addition, Computershare and employees, officers, or agents of the funds, Vanguard, or its affiliates may solicit shareholder proxies in person, online, by telephone, by mail, or by email.

#### **Proxy Solicitation Costs**

Each fund will pay all costs of soliciting proxies from its shareholders, including costs relating to the printing, mailing, and tabulation of proxies. The funds currently estimate Computershare's solicitation costs to be approximately \$18,100,000, and each fund will pay its proportionate share of the costs in accordance with a fixed formula based on the number of shareholders of each fund. These costs are estimates based on currently available information and are subject to change. By voting immediately, you can help your fund avoid the considerable expense of additional proxy solicitations.

#### **Quorum**

Quorum must be achieved for the Meeting to occur. Each trust must achieve quorum by having shares representing more than thirty-three and one-third percent (33 1/3%) of the total combined net asset value of a trust's shares on the record date represented at the Meeting, either by virtual attendance or proxy. Virtual attendance is considered in person attendance. All returned proxies count toward quorum, regardless of how they are voted ("For," "Against," or "Abstain"). Abstentions and broker non-votes will be counted as present and outstanding and entitled to vote for purposes of determining whether a quorum is present at the Meeting, but not as votes cast in respect of the proposal. A broker non-vote is a proxy received from a broker who



holds fund shares on behalf of a shareholder who has not received voting instructions from the shareholders, and does not have discretion to vote the shares on the shareholders' behalf on the proposal. Under rules applicable to broker-dealers, if your broker holds your shares in its name, we expect that the broker will be entitled to vote your shares on the proposal even if it has not received instructions from you. A signed and dated proxy card, voting instruction card, or voting instruction form returned to Computershare without a choice indicated as to the proposal shall be voted "For" all nominees.

### **Virtual Meeting**

The Meeting will be held in a virtual format only. You are invited to attend the Meeting by visiting <https://meetnow.global/MW4PNCM>. You will be required to enter the voting control number found on your proxy card, voting instruction card, voting instruction form, or Notice that you previously received. If your shares are held through an intermediary, you will need to request a Legal Proxy from the intermediary to receive access to the Meeting. You must submit the Legal Proxy along with your name and email address to Computershare. In the Meeting, shareholders will have an opportunity to submit questions and comments via a moderated chat function. The chat will not be visible to other attendees and will be monitored for questions and comments that relate to the proposal included in this Proxy Statement. The submission of questions and comments does not guarantee that any of them will be addressed during the Meeting.

### **Adjournment**

The Meeting may be adjourned by a fund's Board, chief executive officer, or president, or chair of the Meeting, one or more times for any reason (without shareholder vote), including the failure of a quorum to be present at the Meeting. No shareholder vote is required for adjournment. The Meeting may be adjourned for certain trusts regardless of whether action has been taken on the proposal with respect to other trusts. No notice of adjournment of the Meeting to another time or place need be given to the shareholders if such time and place (including that the Meeting will be held by remote communication) are announced at the Meeting at which the adjournment is taken, or notice is given to persons present at the Meeting. Any adjourned Meeting may be held at such time and place, or virtually, as applicable, as determined by a fund's Board, chief executive officer, or president, or chair of the Meeting, in a Board's or such person's sole discretion. Any business that might have been transacted at the original Meeting may be transacted at any adjourned Meeting. If quorum is present with respect to any one or more trusts, the chair of the meeting may, but

shall not be required to, cause a vote to be taken with respect to the proposal for such trusts, which vote can be certified as final and effective notwithstanding the adjournment of the Meeting with respect to other trusts. The shareholders of record entitled to vote at such adjourned meeting shall be the shareholder on the original record date, unless a fund's Board establishes a new record date.

### **Postponement**

Prior to the Meeting, a fund's Board, chief executive officer, or president, or chair of the Meeting, may postpone the Meeting one or more times for any reason by giving notice to each shareholder entitled to vote at the Meeting so postponed of the time and place at which such Meeting will be held. Notice shall be given not fewer than two days (or such other number of days as a trust's Board shall determine in its sole discretion) before the date of such Meeting and otherwise in accordance with a trust's by-laws.

### **Revoking Your Proxy**

Your last vote is the one that counts. Therefore, you can revoke a prior proxy simply by voting again—online, with your proxy card, voting instruction card, or voting instruction form (if you have requested paper proxy materials), or by phone. You can also revoke a prior proxy by writing to the funds' secretary at the following address: Tonya Robinson, The Vanguard Group, Inc., P.O. Box 876, Valley Forge, PA 19482, or by voting at the Meeting. You may revoke your proxy at any time until the announcement that voting has closed at the Meeting.

### **Shareholder Proposals**

Any shareholder proposals to be included in a proxy statement for a fund's next shareholder meeting must be received by the fund within a reasonable period before a fund begins to print and mail its proxy statement for that meeting. Timely submission of a proposal does not guarantee that such proposal will be included in a proxy statement.

### **Voting Rights**

Shareholders of each fund are entitled to cast one vote for each dollar of the fund's net asset value owned on the record date and a fractional vote for each fractional dollar of the fund's net asset value owned on that date.



## **Nominee Accounts**

Upon request, the funds will reimburse nominees for their reasonable expenses in forwarding proxy materials to beneficial owners of the funds' shares. All invoices should be submitted electronically to [Invoice\\_Submission.noreply@vanguard.com](mailto:Invoice_Submission.noreply@vanguard.com).

## **Annual and Semiannual Reports**

Each fund's most recent annual and semiannual reports to shareholders are available at no cost. To request a report, which will be furnished free of charge, please call Vanguard toll-free at 800-662-7447, or write to The Vanguard Group, Inc., P.O. Box 2600, Valley Forge, PA 19482-2600. The reports are also available on the website <https://vgi.vg/fund-literature>. Participants in a company-sponsored 401(k) or other retirement plan administered by Vanguard may call toll-free at 800-523-1188.

## **Proxy Materials**

This Proxy Statement and related proxy materials are available online at <https://www.proxy-direct.com/vanguard/materials>. Shareholders may request this Proxy Statement and related paper proxy materials at no cost by calling Computershare toll-free at 877-816-5331.

## **Other Matters**

At this point, there are no plans to bring other business before the Meeting. However, if any other matters do arise, it is the Boards' intention that proxies will be voted on such matters in accordance with the judgment of the persons identified in the proxy materials as having the authority to vote on matters. If you object to the voting of other matters on your behalf, please notify the Boards in writing before the Meeting.

## **Communications with Trustees**

Vanguard funds shareholders may communicate with one or more trustees, or the Boards, by sending written correspondence to the attention of one or more individual trustees, or the Boards, at The Vanguard Group, Inc., P.O. Box 876, Valley Forge, PA 19482. The current process regarding this type of communication requires that all such correspondence be logged upon receipt, and then be provided to the intended recipient(s), as appropriate. The recipient(s) will then review the shareholder correspondence and determine how to respond.

## **The Vanguard Group, Inc.**

Except as noted below, each of the funds soliciting proxies is a member of Vanguard. Vanguard is owned jointly by the funds it oversees. Vanguard provides the funds with their corporate management, administrative, and distribution services. Vanguard Marketing Corporation, 100 Vanguard Boulevard, Malvern, PA 19355, a wholly owned subsidiary of Vanguard, is the funds' principal underwriter and distributor.

Vanguard Market Liquidity Fund and Vanguard Municipal Low Duration Fund, series of Vanguard CMT Funds, are not members of Vanguard, although they are administered by and pay fees to Vanguard for management, advisory, marketing, accounting, transfer agency, and other services.

## PART V

### Investment Advisors and Funds Information

#### Investment Advisors Information

This section includes a list of the names and addresses of all Vanguard funds' investment advisors. The name(s) of each fund's investment advisor(s) is provided under "Vanguard Funds Information."

Advisor	Address
<b>ARGA Investment Management, LP</b>	1010 Washington Blvd., 6th Floor, Stamford, CT 06901
<b>Ariel Investments, LLC</b>	200 East Randolph St., Chicago, IL 60601
<b>Aristotle Capital Management, LLC</b>	11100 Santa Monica Blvd., Suite 1700, Los Angeles, CA 90025
<b>ArrowMark Colorado Holdings, LLC</b>	100 Filmore St., Suite 325, Denver, CO 80206
<b>Baillie Gifford Overseas Ltd.</b>	Calton Square, 1 Greenside Row, Edinburgh EH1 3AN, Scotland
<b>ClearBridge Investments, LLC</b>	620 8th Ave., New York, NY 10018
<b>Cooke &amp; Bieler, LP</b>	1700 Market St., Suite 3222, Philadelphia, PA 19103
<b>D. E. Shaw Investment Management, L.L.C.</b>	1166 Avenue of the Americas, 9th Floor, New York, NY 10036
<b>Donald Smith &amp; Co., Inc.</b>	152 West 57th St., 22nd Floor, New York, NY 10019
<b>Frontier Capital Management Co., LLC</b>	99 Summer St., Boston, MA 02110
<b>Hotchkis &amp; Wiley Capital Management, LLC</b>	725 S. Figueroa St., 39th Floor, Los Angeles, CA 90017-5439
<b>Jennison Associates LLC</b>	466 Lexington Ave., New York, NY 10017
<b>Lazard Asset Management LLC</b>	30 Rockefeller Plaza, 57th Floor, New York, NY 10112-6300
<b>Los Angeles Capital Management LLC</b>	11150 Santa Monica Blvd., Suite 200, Los Angeles, CA 90025
<b>Ninety One North America, Inc.</b>	65 East 55th St., 30th Floor, New York, NY 10022

Advisor	Address
<b>PRIMECAP Management Company</b>	177 E. Colorado Blvd., Pasadena, CA 91105
<b>Pzena Investment Management, LLC</b>	120 West 45th St., 20th Floor, New York, NY 10036
<b>Sanders Capital, LLC</b>	777 South Flagler Dr., Suite 1100, East Tower, West Palm Beach, FL 33401
<b>Schroder Investment Management North America Inc.</b>	31 Gresham St., London EC2V 7QA, England
<b>Sprucegrove Investment Management Ltd.</b>	181 University Ave., Suite 1300, Toronto, Ontario M5H 3M7
<b>Stephens Investment Management Group, LLC</b>	111 Center St., Little Rock, AR 72201
<b>The Vanguard Group, Inc.</b>	P.O. Box 2600, Valley Forge, PA 19482
<b>Wellington Management Company LLP</b>	280 Congress St., Boston, MA 02110

#### Vanguard Funds Information

This section provides certain required information for each Vanguard fund. Unless specifically provided as of a fund's fiscal year-end (FYE), the information presented is as of **September 30, 2024**.

The beneficial ownership table provides information regarding the ownership of each fund's shares by each nominee for trustee based on certain dollar ranges. As of September 30, 2024, the trustee nominees and officers of the trusts owned, in the aggregate, less than 1% of each fund's outstanding shares.

#### Vanguard 500 Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,277,385,090,914 and 2,732,343,003 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.14%
	National Financial Services LLC, Jersey City, NJ	5.90%
ETF Shares	Charles Schwab & Co., Inc.	17.49%
	National Financial Services LLC	12.55%
	Vanguard Marketing Corporation	12.46%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Select Shares	Northern Trust, FBO Vanguard Fiduciary Trust Company Institutional 500 Index Trust, Valley Forge, PA	95.49%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	22.85%

### Vanguard Advice Select Dividend Growth Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$846,630,436 and 27,505,015 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Advice Select Global Value Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$1,305,348,640 and 44,894,396 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Advice Select International Growth Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Baillie Gifford Overseas Ltd.
- Net assets of \$992,019,966 and 48,969,903 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Baillie Gifford Global Positive Impact Stock Fund

- A series of Vanguard Valley Forge Funds (FYE 12/31).
- Advised by Baillie Gifford Overseas Ltd.
- Net assets of \$230,395,164 and 11,859,294 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	National Financial Services LLC, Jersey City, NJ	23.87%
	Charles Schwab & Co., Inc., San Francisco, CA	12.16%

### Vanguard Balanced Index Fund

- A series of Vanguard Valley Forge Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group; Vanguard Fixed Income Group.
- Net assets of \$58,070,993,805 and 1,164,872,550 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	7.97%
	National Financial Services LLC, Jersey City, NJ	5.34%
Institutional Shares	Empower Annuity Insurance Company of America, FBO Minnesota State Retirement System Defined Contribution Plan, Greenwood Village, CO	14.11%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	8.56%
	TIAA Trust, N.A., Charlotte, NC	6.46%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	40.84%

### Vanguard California Intermediate-Term Tax-Exempt Fund

- A series of Vanguard California Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$16,079,378,289 and 1,392,934,079 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	33.50%
	National Financial Services LLC, Jersey City, NJ	8.47%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	55.98%
	National Financial Services LLC, Jersey City, NJ	16.75%

### Vanguard California Long-Term Tax-Exempt Fund

- A series of Vanguard California Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,664,382,720 and 485,243,217 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	14.43%

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	42.75%
	National Financial Services LLC, Jersey City, NJ	12.44%
	Merrill Lynch Pierce Fenner & Smith Inc., Jacksonville, FL	6.37%
	Wells Fargo Clearing Services LLC, Saint Louis, MO	5.54%

### Vanguard California Municipal Money Market Fund

- A series of Vanguard California Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,688,350,718 and 3,687,243,743 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Northern Trust, FBO Charles Kyne McCabe Trust, Chicago, IL	5.76%

### Vanguard California Tax-Exempt Bond ETF

- A series of Vanguard California Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$243,179,907 and 2,400,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Richard Jacobs	5.34%

### Vanguard Capital Opportunity Fund

- A series of Vanguard Horizon Funds (FYE 9/30).
- Advised by PRIMECAP Management Company.
- Net assets of \$23,114,924,463 and 121,535,422 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Mac and Company-BNY Mellon, A/C 657638, Pittsburgh, PA	6.19%
Investor Shares	National Financial Services LLC, Jersey City, NJ	12.77%

### Vanguard Cash Reserves Federal Money Market Fund

- A series of Vanguard Money Market Reserves (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$120,184,160,688 and 120,142,421,573 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Commodity Strategy Fund

- A series of Vanguard Trustees' Equity Fund (FYE 10/31).
- Advised by Vanguard Fixed Income Group; Vanguard Quantitative Equity Group.
- Net assets of \$1,484,283,864 and 56,216,539 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	27.35%
	SEI Private Trust Company, M&T Bank, Oaks, PA	5.33%

### Vanguard Communication Services Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,377,607,310 and 31,575,363 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	State Street Bank and Trust Company, FBO Guideline Technologies 401K, Overland Park, KS	7.77%
	National Financial Services LLC, Jersey City, NJ	5.14%
ETF Shares	Charles Schwab & Co., Inc.	20.87%
	National Financial Services LLC	9.19%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	8.58%
	UBS Financial Services LLC	7.51%
	Vanguard Marketing Corporation	6.51%
	Citibank, N.A.	6.35%
	J.P. Morgan Chase Bank, N.A.	5.50%
Morgan Stanley DW Inc.	5.50%	

### Vanguard Consumer Discretionary Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$6,525,963,810 and 20,894,094 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	7.34%
ETF Shares	Charles Schwab & Co., Inc.	20.11%
	Vanguard Marketing Corporation	16.01%
	National Financial Services LLC	10.96%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	10.69%

### Vanguard Consumer Staples Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$8,581,850,556 and 45,685,259 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	21.32%
	Empower Annuity Insurance Company of America, FBO Empower Benefit Plans, Greenwood Village, CO	9.05%
	Charles Schwab & Co., Inc., San Francisco, CA	5.98%
ETF Shares	Charles Schwab & Co., Inc.	21.67%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	13.44%
	National Financial Services LLC	13.41%
	Vanguard Marketing Corporation	13.26%
	Pershing LLC	5.33%
	Morgan Stanley DW Inc.	5.20%

### Vanguard Core Bond ETF

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$1,169,755,527 and 14,800,000 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Core Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$12,696,018,252 and 703,364,117 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	23.52%
	National Financial Services LLC, Jersey City, NJ	14.73%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	23.83%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	7.50%
	National Financial Services LLC, Jersey City, NJ	6.94%

### Vanguard Core-Plus Bond ETF

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$248,854,116 and 3,150,000 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Core-Plus Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$599,381,970 and 37,997,498 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.93%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.48%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	5.53%

### Vanguard Core Tax-Exempt Bond ETF<sup>9</sup>

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- No net assets or outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Developed Markets Index Fund

- A series of Vanguard Tax-Managed Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$206,981,603,730 and 6,060,995,997 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	9.20%
	State Street Bank and Trust Company, FBO Guideline Technologies 401K, Overland Park, KS	8.63%
ETF Shares	Charles Schwab & Co., Inc.	25.49%
	National Financial Services LLC	12.67%
	Ridge Clearing & Outsourcing Solutions, Inc.	5.31%
Institutional Plus Shares	TIAA Trust, N.A., Charlotte, NC	21.05%
	Mac and Company-BNY Mellon, A/C 489003, Pittsburgh, PA	16.54%
	National Financial Services LLC, Jersey City, NJ	7.41%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	6.93%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	17.15%
	TIAA Trust, N.A., Charlotte, NC	7.34%
	Charles Schwab & Co., Inc., San Francisco, CA	5.71%
	US Bank N.A., FBO Capino, Milwaukee, WI	5.26%
Investor Shares	Ascensus Trust Company, FBO Vanguard Direct Frontier Trust Company, Fargo, ND	43.60%
	Georgetown University Retirement Plan, Washington, DC	27.41%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	12.54%

### Vanguard Diversified Equity Fund

- A series of Vanguard Trustees' Equity Fund (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$2,947,050,099 and 56,831,392 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	14.98%

### Vanguard Dividend Appreciation Index Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$102,126,752,570 and 732,022,240 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	8.95%
	Charles Schwab & Co., Inc., San Francisco, CA	7.92%
ETF Shares	Charles Schwab & Co., Inc.	21.36%
	National Financial Services LLC	13.31%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	9.03%
	Vanguard Marketing Corporation	7.99%
	Morgan Stanley DW Inc.	6.50%

### Vanguard Dividend Growth Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$55,038,000,988 and 1,316,811,252 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	National Financial Services LLC, Jersey City, NJ	14.35%
	Charles Schwab & Co., Inc., San Francisco, CA	13.96%

<sup>9</sup> Vanguard Core Tax-Exempt Bond ETF commenced operations on November 21, 2024.

### Vanguard Emerging Markets Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,645,735,933 and 165,121,256 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	44.87%
	National Financial Services LLC, Jersey City, NJ	13.71%
	UBS Financial Services Inc., Weehawken, NJ	7.28%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	19.23%
	National Financial Services LLC, Jersey City, NJ	13.30%

### Vanguard Emerging Markets Government Bond Index Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,911,848,567 and 101,252,777 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.23%
Institutional Shares	Northern Trust, FBO Ascensus, Chicago, IL	71.81%
	Northern Trust, FBO Florida 529 Saving Plan - DV, Chicago, IL	14.32%
	Union Bank and Trust, FBO Aces Trust Fund, Lincoln, NE	13.86%
ETF Shares	Charles Schwab & Co., Inc.	17.48%
	Edward D. Jones & Co.	17.39%
	J.P. Morgan Clearing Corp.	9.99%
	J.P. Morgan Chase Bank, N.A.	9.15%
	National Financial Services LLC	7.68%

### Vanguard Emerging Markets Select Stock Fund

- A series of Vanguard Trustees' Equity Fund (FYE 10/31).
- Advised by Baillie Gifford Overseas Ltd.; Pzena Investment Management, LLC; Wellington Management Company LLP.
- Net assets of \$835,114,966 and 34,936,746 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	US Bank N.A., FBO Capino, Milwaukee, WI	5.24%

### Vanguard Emerging Markets Stock Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$116,068,579,026 and 2,546,467,838 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.03%
	State Street Bank and Trust Company, FBO Guideline Technologies 401K, Overland Park, KS	7.59%
	National Financial Services LLC, Jersey City, NJ	6.72%
	ETF Shares	Charles Schwab & Co., Inc.
ETF Shares	National Financial Services LLC	10.45%
	Pershing LLC	7.62%
	Northern Trust Company	6.50%
Institutional Plus Shares	TIAA Trust, N.A., Charlotte, NC	24.88%
	Mac and Company-BNY Mellon, A/C 313717, Pittsburgh, PA	13.40%
	Google LLC 401(K) Savings Plan, Mountain View, CA	9.19%
	Charles Schwab & Co., Inc., San Francisco, CA	6.02%
Institutional Plus Shares	Northern Trust, FBO Accenture United States 401(K) Match and Savings Plan, Chicago, IL	5.36%
	Institutional Shares	National Financial Services LLC, Jersey City, NJ
Institutional Shares	TIAA Trust, N.A., Charlotte, NC	12.38%
	Charles Schwab & Co., Inc., San Francisco, CA	9.95%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.94%
	Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND
Investor Shares	Georgetown University Retirement Plan, Washington, DC	7.92%
	Finnegan, Henderson Et Al. Profit Sharing Plan, Washington, DC	6.34%
Investor Shares	Brightsphere Inc. Profit Sharing and 401(K) Plan, Boston, MA	5.27%
	Cleveland Brothers Retirement Plan, Harrisburg, PA	5.16%



### Vanguard Energy Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$5,887,871,730 and 78,378,705 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.48%
	National Financial Services LLC, Jersey City, NJ	6.61%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	5.88%

### Vanguard Energy Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$9,425,099,127 and 90,628,584 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	20.05%
	Vanguard Marketing Corporation	18.13%
	National Financial Services LLC	10.92%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	6.65%
	Morgan Stanley DW Inc.	6.13%
	State Street Bank and Trust Company	5.05%

### Vanguard Equity Income Fund

- A series of Vanguard Fenway Funds (FYE 9/30).
- Advised by Vanguard Quantitative Equity Group; Wellington Management Company LLP.
- Net assets of \$59,524,947,474 and 682,911,701 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.15%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	10.13%
	National Financial Services LLC, Jersey City, NJ	9.11%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	24.21%
	National Financial Services LLC, Jersey City, NJ	15.79%

### Vanguard ESG International Stock ETF

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,133,054,887 and 67,200,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Vanguard Marketing Corporation	51.14%
	Charles Schwab & Co., Inc.	15.84%
	National Financial Services LLC	7.94%

### Vanguard ESG U.S. Corporate Bond ETF

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$692,992,424 and 10,700,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Vanguard Marketing Corporation	60.44%
	Charles Schwab & Co., Inc.	19.77%
	National Financial Services LLC	7.44%

### Vanguard ESG U.S. Stock ETF

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$9,586,114,166 and 94,275,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Vanguard Marketing Corporation	37.84%
	Charles Schwab & Co., Inc.	18.91%
	National Financial Services LLC	8.57%
	J.P. Morgan Chase Bank, N.A.	5.73%

## Vanguard European Stock Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$26,098,278,437 and 363,095,220 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.80%
	National Financial Services LLC, Jersey City, NJ	5.03%
ETF Shares	Charles Schwab & Co., Inc.	14.34%
	National Financial Services LLC	10.87%
	State Street Bank and Trust Company	10.27%
	J.P. Morgan Chase Bank, N.A.	8.98%
	Morgan Stanley DW Inc.	7.05%
	J.P. Morgan Clearing Corp.	6.67%
	The Bank of New York Mellon	5.34%
Institutional Plus Shares	Arthur L. Williams Jr., Palm Beach, FL	81.24%
	Angela H. Williams, Duluth, GA	18.76%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	34.59%
	J.P. Morgan Chase Bank N.A., Vanguard Charitable Program European Stock Pool, Brooklyn, NY	6.72%
Investor Shares	SLMA Retirement Savings Plan, Oakbrook Terrace, IL	9.87%
	Brightsphere Inc. Profit Sharing and 401(K) Plan, Boston, MA	9.82%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	9.62%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	8.56%
	Memorial Health Services 403(B)(7) Tax Sheltered Annuity Plan, Fountain Valley, CA	7.42%
	QRM 401(K) Retirement Savings Plan, Chicago, IL	6.80%
	Shartsis Friese LLP Profit Sharing/401(K) Plan, San Francisco, CA	6.62%
	Intercity Transit Employees' Retirement Plan and Trust, Olympia, WA	5.09%

## Vanguard Explorer Fund

- A series of Vanguard Explorer Fund (FYE 10/31).
- Advised by ArrowMark Colorado Holdings, LLC; ClearBridge Investments, LLC; Stephens Investment Management Group, LLC; Vanguard Quantitative Equity Group; Wellington Management Company LLP.
- Net assets of \$22,532,575,543 and 194,913,637 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	17.01%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	28.41%
	Vanguard Diversified Equity Fund, Valley Forge, PA	8.97%
	Charles Schwab & Co., Inc., San Francisco, CA	6.16%

## Vanguard Explorer Value Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Ariel Investments, LLC; Frontier Capital Management Co., LLC; Wellington Management Company LLP.
- Net assets of \$1,128,010,295 and 23,133,325 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	30.08%
	Deloitte Profit Sharing Plan, New York, NY	7.29%
	Empower Annuity Insurance Company of America, FBO Skadden Arps Slate Meagher & Flom, Greenwood Village, CO	5.15%

### Vanguard Extended Duration Treasury Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,206,831,639 and 92,442,513 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	19.69%
	Interactive Broker LLC	12.25%
	National Financial Services LLC	9.57%
	Vanguard Marketing Corporation	9.18%
	Morgan Stanley DW Inc.	5.53%
	J.P. Morgan Chase Bank, N.A.	5.49%
Institutional Plus Shares	Transocean U.S. Retirement Plan, Houston, TX	100.00%
Institutional Shares	Northern Trust, FBO U of C - 3 Long Duration, Chicago, IL	20.64%
	US Bank N.A., FBO Capino, Milwaukee, WI	10.82%
	Mac and Company-BNY Mellon, A/C 727545, Pittsburgh, PA	9.32%
	New York University Retiree Health and Welfare Plan, New York, NY	8.90%
	Northern Trust, FBO University of Chicago, Chicago, IL	7.57%
	University of Virginia Physicians Group Clinicians Supplemental Retirement Plan, Charlottesville, VA	6.57%
	Northern Trust, FBO Johns Hopkins Health System, Chicago, IL	6.01%
	St. Lukes Hospital of Bethlehem Defined Benefit Pension Plan, Bethlehem, PA	5.04%

### Vanguard Extended Market Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$107,211,251,840 and 594,433,710 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	7.33%
	National Financial Services LLC, Jersey City, NJ	5.07%
ETF Shares	Vanguard Marketing Corporation	34.94%
	Charles Schwab & Co., Inc.	14.80%
	National Financial Services LLC	13.37%
	Morgan Stanley DW Inc.	5.40%
Institutional Plus Shares	TIAA Trust, N.A., Charlotte, NC	28.32%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	22.96%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	11.15%
Institutional Select Shares	Northern Trust, FBO Vanguard Fiduciary Trust Company Institutional Extended Market Index Trust, Valley Forge, PA	99.97%
Institutional Shares	TIAA Trust, N.A., Charlotte, NC	17.88%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	15.17%
	Charles Schwab & Co., Inc., San Francisco, CA	8.02%
Investor Shares	Sierra Pacific Industries Employees' Retirement Plan, Redding, CA	9.23%
	Griffon Corporation, Jericho, NY	6.05%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	5.35%

### Vanguard Federal Money Market Fund

- A series of Vanguard Money Market Reserves (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$315,202,752,872 and 316,235,895,608 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard Brokerage Services, A Division of VMC via Omnibus Account, Valley Forge, PA	62.44%
	Vanguard Brokerage Services, A Division of VMC via Omnibus Account, Valley Forge, PA	6.91%

### Vanguard Financials Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$10,986,455,153 and 107,529,779 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	5.25%
ETF Shares	Merrill Lynch, Pierce, Fenner & Smith Inc.	29.66%
	Charles Schwab & Co., Inc.	16.33%
	Vanguard Marketing Corporation	10.24%
	National Financial Services LLC	10.17%
	Morgan Stanley DW Inc.	6.09%

### Vanguard FTSE All-World ex-US Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$59,296,042,544 and 957,116,177 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.72%
	National Financial Services LLC, Jersey City, NJ	6.44%
	Vanguard Variable Insurance Funds Total	5.03%
	International Stock Market Index Portfolio, Valley Forge, PA	

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Vanguard Marketing Corporation	20.00%
	Charles Schwab & Co., Inc.	19.94%
	National Financial Services LLC	9.53%
	Morgan Stanley DW Inc.	6.41%
	Comp Trust	5.59%
Institutional Plus Shares	Driscoll Childrens Hospital, Corpus Christi, TX	24.12%
	Toyota Motor Insurance Services Inc., Plano, TX	11.89%
	Driscoll Childrens Hospital Driscoll Endowment Fund, Corpus Christi, TX	8.48%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	8.35%
	Adobe Inc. 401(K) Retirement Savings Plan, San Jose, CA	7.68%
	Anheuser-Busch 401(K) Savings and Retirement Plan, Saint Louis, MO	7.38%
	The Davis Family Foundation, Hanover, MD	6.25%
	Science Applications International Corporation Retirement Plan, Reston, VA	6.14%
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	9.20%
	National Financial Services LLC, Jersey City, NJ	9.07%

### Vanguard FTSE All-World ex-US Small-Cap Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$11,205,226,313 and 123,537,359 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	14.85%
	National Financial Services LLC, Jersey City, NJ	6.51%
ETF Shares	Charles Schwab & Co., Inc.	33.96%
	National Financial Services LLC	13.03%
	Pershing LLC	11.79%
	Edward D. Jones & Co.	8.47%
	Vanguard Marketing Corporation	7.88%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	National Financial Services LLC, Jersey City, NJ	45.32%
	Northshore University Healthsystem, Evanston, IL	13.48%
	Pershing LLC, Jersey City, NJ	10.58%
	Charles Schwab & Co., Inc., San Francisco, CA	8.04%
	Swiss Vorsorgestiftung Für Das Kabinenpersonal Pensionskasse Swiss Cockpit, Glattbrugg, Switzerland	5.68%

### Vanguard FTSE Social Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$21,722,580,285 and 473,944,749 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.56%
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	37.85%
	TIAA Trust, N.A., Charlotte, NC	8.01%
	Kaiser Permanente 401K Retirement Plan (KP401K), Oakland, CA	6.97%
	Charles Schwab & Co., Inc., San Francisco, CA	5.91%

### Vanguard Global Capital Cycles Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$1,529,876,677 and 109,014,452 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Global Credit Bond Fund

- A series of Vanguard Charlotte Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$601,822,037 and 33,271,699 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Union Bank and Trust, FBO Nebraska Educational Savings, Lincoln, NE	25.66%
	UBS Financial Services Inc., Weehawken, NJ	21.67%
Investor Shares	Ascensus Trust Company, FBO Omnibus Various Retirement Accounts, Fargo, ND	7.01%

### Vanguard Global Environmental Opportunities Stock Fund

- A series of Vanguard Trustees' Equity Fund (FYE 10/31).
- Advised by Ninety One North America, Inc.
- Net assets of \$82,331,199 and 3,178,829 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	The Skoll Fund, Palo Alto, CA	18.73%
	The Skoll Foundation, Palo Alto, CA	17.39%
Investor Shares	Ascensus Trust Company, FBO Omnibus Various Retirement Accounts, Fargo, ND	5.92%

### Vanguard Global Equity Fund

- A series of Vanguard Horizon Funds (FYE 9/30).
- Advised by Baillie Gifford Overseas Ltd.; Pzena Investment Management, LLC; Wellington Management Company LLP.
- Net assets of \$8,425,597,114 and 222,449,751 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.23%
	National Financial Services LLC, Jersey City, NJ	7.88%
	Pershing LLC, Jersey City, NJ	5.46%

### Vanguard Global ESG Select Stock Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$1,406,503,176 and 30,483,064 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	18.96%
Investor Shares	National Financial Services LLC, Jersey City, NJ	6.96%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	6.09%

### Vanguard Global ex-U.S. Real Estate Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$3,995,863,958 and 88,796,748 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.19%
ETF Shares	Charles Schwab & Co., Inc.	28.13%
	Pershing LLC	21.06%
	National Financial Services LLC	12.27%
	J.P. Morgan Chase Bank, N.A.	9.44%
	Vanguard Marketing Corporation	5.92%
Institutional Shares	Washington Suburban Sanitary Commission Employees Retirement Plan, Laurel, MD	100.00%

### Vanguard Global Minimum Volatility Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$2,103,692,995 and 71,513,975 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	US Bank N.A., FBO Capino, Milwaukee, WI	18.18%
	National Financial Services LLC, Jersey City, NJ	13.67%
	Charles Schwab & Co., Inc., San Francisco, CA	9.86%
	SEI Private Trust Company, Principal Financial, Oaks, PA	7.08%
Investor Shares	National Financial Services LLC, Jersey City, NJ	16.04%
	Charles Schwab & Co., Inc., San Francisco, CA	11.80%

### Vanguard Global Wellesley Income Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$558,652,420 and 20,717,478 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	7.99%
Investor Shares	National Financial Services LLC, Jersey City, NJ	10.74%
	Ascensus Trust Company, FBO Omnibus Various Retirement Accounts, Fargo, ND	5.88%

### Vanguard Global Wellington Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$2,586,155,392 and 77,830,542 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	21.72%
	State Street Bank and Trust Company, Wellington Management Company Defined Benefit, Boston, MA	8.57%
Investor Shares	National Financial Services LLC, Jersey City, NJ	20.31%

### Vanguard GNMA Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$14,913,757,141 and 1,574,815,739 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.88%
	National Financial Services LLC, Jersey City, NJ	6.67%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	57.66%
	Charles Schwab & Co., Inc., San Francisco, CA	9.15%

### Vanguard Growth and Income Fund

- A series of Vanguard Quantitative Funds (FYE 9/30).
- Advised by D. E. Shaw Investment Management, L.L.C.; Los Angeles Capital Management LLC; Wellington Management Company LLP.
- Net assets of \$15,666,158,030 and 163,754,737 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard Diversified Equity Fund, Valley Forge, PA	16.42%
	Charles Schwab & Co., Inc., San Francisco, CA	9.11%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	7.71%
	National Financial Services LLC, Jersey City, NJ	6.25%

### Vanguard Growth Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$261,438,723,677 and 977,931,353 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.92%
	National Financial Services LLC, Jersey City, NJ	6.68%

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	20.91%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	14.32%
	National Financial Services LLC	14.25%
	Edward D. Jones & Co.	9.08%
	Vanguard Marketing Corporation	7.07%
	Morgan Stanley DW Inc.	6.20%
Institutional Shares	Northern Trust, FBO New York College Savings Plan Growth Stock Index Portfolio, Newton, MA	13.24%
	Charles Schwab & Co., Inc., San Francisco, CA	12.57%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	12.34%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	59.07%

### Vanguard Health Care Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$48,664,424,580 and 461,311,482 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	21.78%
	National Financial Services LLC, Jersey City, NJ	10.52%

### Vanguard Health Care Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$21,558,131,239 and 87,033,731 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	20.89%
	Vanguard Marketing Corporation	16.35%
	National Financial Services LLC	11.63%
	Morgan Stanley DW Inc.	6.38%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	5.08%



### Vanguard High Dividend Yield Index Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$72,735,811,726 and 816,612,014 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	11.72%
	Charles Schwab & Co., Inc., San Francisco, CA	8.54%
ETF Shares	Charles Schwab & Co., Inc.	21.25%
	National Financial Services LLC	12.99%
	Vanguard Marketing Corporation	10.54%
	Morgan Stanley DW Inc.	6.04%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	5.38%

### Vanguard High-Yield Corporate Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group; Wellington Management Company LLP.
- Net assets of \$24,940,705,935 and 4,514,239,339 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.65%
	National Financial Services LLC, Jersey City, NJ	7.07%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	23.10%
	National Financial Services LLC, Jersey City, NJ	12.93%

### Vanguard High-Yield Tax-Exempt Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$16,442,543,953 and 1,508,233,991 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.52%
	National Financial Services LLC, Jersey City, NJ	8.89%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	28.07%
	National Financial Services LLC, Jersey City, NJ	26.12%

### Vanguard Industrials Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$6,011,928,078 and 24,442,539 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	7.91%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	6.71%
ETF Shares	Merrill Lynch, Pierce, Fenner & Smith Inc.	23.83%
	Charles Schwab & Co., Inc.	16.80%
	National Financial Services LLC	9.34%
	Vanguard Marketing Corporation	8.91%
	UBS Financial Services LLC	5.93%
	Morgan Stanley DW Inc.	5.90%

### Vanguard Inflation-Protected Securities Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$27,348,740,723 and 1,945,550,294 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	12.15%
	Charles Schwab & Co., Inc., San Francisco, CA	10.87%
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	14.14%
	TIAA Trust, N.A., Charlotte, NC	11.75%
	National Financial Services LLC, Jersey City, NJ	7.83%
	Charles Schwab & Co., Inc., San Francisco, CA	6.23%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	20.77%
	National Financial Services LLC, Jersey City, NJ	12.00%

### Vanguard Information Technology Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$90,972,702,594 and 176,974,303 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	7.64%
ETF Shares	Vanguard Marketing Corporation	17.40%
	Charles Schwab & Co., Inc.	16.64%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	15.92%
	National Financial Services LLC	10.93%
	Morgan Stanley DW Inc.	5.13%

### Vanguard Institutional Index Fund

- A series of Vanguard Institutional Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$309,797,999,310 and 653,388,237 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	19.51%
	TIAA Trust, N.A., Charlotte, NC	11.45%
	National Financial Services LLC, Jersey City, NJ	6.52%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	8.06%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	7.97%
	TIAA Trust, N.A., Charlotte, NC	6.82%

### Vanguard Institutional Intermediate-Term Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$31,524,143,435 and 1,451,953,626 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Mm30051, Valley Forge, PA	5.63%
	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Nwlrst, Valley Forge, PA	5.61%
	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Mgt9615A, Valley Forge, PA	5.56%
	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Nyga29700, Valley Forge, PA	5.40%
	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Pru 62313, Valley Forge, PA	5.40%
	Northern Trust, FBO Vanguard Fiduciary Trust Company Contract Pac027822, Valley Forge, PA	5.03%

### Vanguard Institutional Short-Term Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,873,521,932 and 441,505,531 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Institutional Total Stock Market Index Fund

- A series of Vanguard Institutional Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$31,427,761,722 and 320,170,559 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	Vanguard Retirement and Savings Plan, Malvern, PA	8.76%
	Lilly Endowment Inc., Indianapolis, IN	6.14%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.03%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	16.03%
	US Bank N.A., FBO Capino, Milwaukee, WI	14.67%
	National Financial Services LLC, Jersey City, NJ	8.76%
	Lakeside School, Seattle, WA	5.29%
	Farm Bureau Mutual Insurance Company of Michigan, Lansing, MI	5.01%

### Vanguard Intermediate-Term Bond Index Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$42,059,748,875 and 2,342,359,642 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.52%
	National Financial Services LLC, Jersey City, NJ	8.25%
ETF Shares	Charles Schwab & Co., Inc.	24.42%
	National Financial Services LLC	14.74%
	Vanguard Marketing Corporation	7.91%
	Edward D. Jones & Co.	7.54%
	Pershing LLC	6.84%
Institutional Plus Shares	Mid Atlantic Clearing and Settlement Corporation, FBO Matc Omnibus Div Reinvest Ltgc., Pittsburgh, PA	30.84%
	National Financial Services LLC, Jersey City, NJ	25.56%
	Empower Annuity Insurance Company of America, FBO DTE US Intermediate Bond Index, Greenwood Village, CO	16.99%
	Mg Trust Company - Matrix, FBO Gundersen Lutheran Employees, Phoenix, AZ	12.32%
	Mac and Company-BNY Mellon, A/C 710986, Pittsburgh, PA	10.51%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	10.14%
	Charles Schwab & Co., Inc., San Francisco, CA	7.89%
	National Financial Services LLC, Jersey City, NJ	6.75%
	TIAA Trust, N.A., Charlotte, NC	6.64%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	5.93%
	Minnesota Life Insurance Company/Securian, Saint Paul, MN	5.80%
	Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND
Investor Shares	Dayton Progress/PCS Employee Retirement Plan, Dayton, OH	8.13%
	Stockman Financial Corporation 401(K) Plan, Billings, MT	6.78%
	Hutchinson Aerospace & Industry, Inc. 401(K) Plan, Hopkinton, MA	6.20%
	Aerospace Voluntary Annuity/Account Program, Los Angeles, CA	5.11%

### Vanguard Intermediate-Term Corporate Bond Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$53,260,376,928 and 688,150,006 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.90%
ETF Shares	Charles Schwab & Co., Inc.	21.08%
	National Financial Services LLC	11.05%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	10.29%
	J.P. Morgan Chase Bank, N.A.	8.87%
	J.P. Morgan Clearing Corp.	6.37%
	The Bank of New York Mellon	5.22%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	SEI Private Trust Company, Principal Financial, Oaks, PA	24.47%
	Citibank, N.A. Ashland Asbestos Defense Trust, New York, NY	18.18%
	Pacific Life Foundation, Newport Beach, CA	9.08%
	Munich Reinsurance America Inc. Pension Plan, Princeton, NJ	7.77%
	Northern Trust, FBO Modern Woodmen Retirement, Chicago, IL	6.85%
	Citibank, N.A. Ashland Environmental Account, New York, NY	5.64%
	US Bank N.A., FBO Capino, Milwaukee, WI	5.34%
	New England Regional Council of Carpenters, Dorchester, MA	5.32%

#### Vanguard Intermediate-Term Investment-Grade Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$35,527,119,262 and 3,988,054,057 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	12.58%
	National Financial Services LLC, Jersey City, NJ	5.60%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.20%
	National Financial Services LLC, Jersey City, NJ	11.30%

#### Vanguard Intermediate-Term Tax-Exempt Bond ETF

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$247,626,784 and 2,450,000 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

#### Vanguard Intermediate-Term Tax-Exempt Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$76,253,643,521 and 5,522,670,968 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	22.19%
	National Financial Services LLC, Jersey City, NJ	14.43%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	8.29%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	34.90%
	National Financial Services LLC, Jersey City, NJ	18.20%

#### Vanguard Intermediate-Term Treasury Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$6,837,401,137 and 674,781,831 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	14.81%
	Charles Schwab & Co., Inc., San Francisco, CA	9.71%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.05%
	National Financial Services LLC, Jersey City, NJ	10.45%

#### Vanguard Intermediate-Term Treasury Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$37,934,410,876 and 835,435,497 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	36.15%
	National Financial Services LLC, Jersey City, NJ	10.01%

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	20.31%
	National Financial Services LLC	16.73%
	J.P. Morgan Chase Bank, N.A.	13.05%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	10.22%
	Pershing LLC	5.31%
	The Bank of New York Mellon	5.14%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	23.79%
	Charles Schwab & Co., Inc., San Francisco, CA	16.12%
	US Bank N.A., FBO Capino, Milwaukee, WI	6.28%

### Vanguard International Core Stock Fund

- A series of Vanguard Horizon Funds (FYE 9/30).
- Advised by Wellington Management Company LLP.
- Net assets of \$1,981,628,629 and 75,308,372 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Northern Trust, FBO VFTC, FBO Fedex VG Intl., Valley Forge, PA	7.65%
Investor Shares	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	5.35%

### Vanguard International Dividend Appreciation Index Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$7,896,019,395 and 94,526,288 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.05%
	FCCI Insurance Company, Sarasota, FL	7.75%
ETF Shares	Charles Schwab & Co., Inc.	29.75%
	National Financial Services LLC	11.93%
	Edward D. Jones & Co.	8.93%
	Morgan Stanley DW Inc.	8.18%
	Pershing LLC	6.69%
	Vanguard Marketing Corporation	6.04%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	5.65%

### Vanguard International Dividend Growth Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$119,695,225 and 10,119,701 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard International Explorer Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Baillie Gifford Overseas Ltd.; Schroder Investment Management North America Inc.; Wellington Management Company LLP.
- Net assets of \$1,444,410,994 and 77,274,910 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard International Growth Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Baillie Gifford Overseas Ltd.; Schroder Investment Management North America Inc.
- Net assets of \$46,430,821,486 and 523,718,626 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.67%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.07%
	National Financial Services LLC, Jersey City, NJ	5.61%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	32.58%
	Charles Schwab & Co., Inc., San Francisco, CA	10.28%
	National Financial Services LLC, Jersey City, NJ	6.71%

### Vanguard International High Dividend Yield Index Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$8,662,684,386 and 125,663,162 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Northern Trust, FBO Commissioners of The Land, Chicago, IL	26.53%
	Charles Schwab & Co., Inc., San Francisco, CA	7.53%
	FCCI Insurance Company, Sarasota, FL	5.75%
ETF Shares	Charles Schwab & Co., Inc.	30.44%
	National Financial Services LLC	10.71%
	Vanguard Marketing Corporation	8.80%
	Edward D. Jones & Co.	7.68%
	Morgan Stanley DW Inc.	6.06%

### Vanguard International Value Fund

- A series of Vanguard Trustees' Equity Fund (FYE 10/31).
- Advised by ARGA Investment Management, LP; Lazard Asset Management LLC; Sprucegrove Investment Management Ltd.
- Net assets of \$13,974,616,793 and 311,113,104 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	16.37%
	Charles Schwab & Co., Inc., San Francisco, CA	11.18%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.14%

### Vanguard Large-Cap Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$55,902,731,706 and 258,824,223 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.07%
	National Financial Services LLC, Jersey City, NJ	9.38%
ETF Shares	Charles Schwab & Co., Inc.	29.85%
	Edward D. Jones & Co.	14.78%
	National Financial Services LLC	10.59%
	Vanguard Marketing Corporation	5.68%
	Pershing LLC	5.42%
Institutional Shares	Empower Annuity Insurance Company of America, FBO Employee Benefit Clients 401K, Greenwood Village, CO	12.38%
	Charles Schwab & Co., Inc., San Francisco, CA	9.61%
	National Financial Services LLC, Jersey City, NJ	8.98%
	Mac and Company-BNY Mellon, A/C 866757, Pittsburgh, PA	8.67%
	Pershing LLC, Jersey City, NJ	5.35%
	Empower Annuity Insurance Company of America, FBO Plumbers Local Union No. 1 Empl, Greenwood Village, CO	5.25%
	Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND
Investor Shares	Eagle Corporation Employees Flexible Compensation Plan, Charlottesville, VA	14.87%
	QRM 401(K) Retirement Savings Plan, Chicago, IL	13.78%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	10.38%
	Aerospace Voluntary Annuity/Account Program, Los Angeles, CA	5.90%
	Brightsphere Inc. Profit Sharing and 401(K) Plan, Boston, MA	5.86%

### Vanguard LifeStrategy Conservative Growth Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$10,555,372,343 and 481,956,198 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard LifeStrategy Growth Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$22,585,332,060 and 478,727,078 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	7.39%

### Vanguard LifeStrategy Income Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,080,528,703 and 257,296,346 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard LifeStrategy Moderate Growth Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$21,970,582,861 and 650,053,547 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.10%

### Vanguard Limited-Term Tax-Exempt Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$30,358,544,270 and 2,773,225,819 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	21.45%
	Charles Schwab & Co., Inc., San Francisco, CA	15.99%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	5.61%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	36.42%
	National Financial Services LLC, Jersey City, NJ	17.40%

### Vanguard Long-Term Bond Index Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$9,369,192,075 and 364,877,853 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.54%
ETF Shares	National Financial Services LLC	18.37%
	Charles Schwab & Co., Inc.	16.18%
	Vanguard Marketing Corporation	14.03%
	Pershing LLC	6.61%
	First Clearing, LLC	5.29%
Institutional Plus Shares	Munich Reinsurance America Inc. Pension Plan, Princeton, NJ	59.55%
	Stanford University Staff Retirement Annuity Plan, Redwood City, CA	33.08%
	National Financial Services LLC, Jersey City, NJ	5.56%
Institutional Shares	US Bank N.A., FBO Capino, Milwaukee, WI	18.65%
	Mac and Company-BNY Mellon, A/C 511839, Pittsburgh, PA	10.84%
	SEI Private Trust Company, Principal Financial, Oaks, PA	10.73%
	Charles Schwab & Co., Inc., San Francisco, CA	5.31%



### Vanguard Long-Term Corporate Bond Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$15,135,545,535 and 209,408,750 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Reliance Trust Company, FBO Maril & Co., FBO NG, Atlanta, GA	13.81%
ETF Shares	The Bank of New York Mellon	43.39%
	Charles Schwab & Co., Inc.	8.17%
	National Financial Services LLC	5.66%
Institutional Shares	New York University Retiree Health and Welfare Plan, New York, NY	48.31%
	Charles Schwab & Co., Inc., San Francisco, CA	25.30%
	Mac and Company-BNY Mellon, A/C 695307, Pittsburgh, PA	13.35%
	Northern Trust, FBO Ppa - Cash 4492957, Chicago, IL	9.04%

### Vanguard Long-Term Investment-Grade Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group; Wellington Management Company LLP.
- Net assets of \$16,367,803,580 and 1,998,885,841 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	8.12%
	Charles Schwab & Co., Inc., San Francisco, CA	6.79%
	Transocean U.S. Retirement Plan, Houston, TX	5.04%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	72.65%

### Vanguard Long-Term Tax-Exempt Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$17,961,779,427 and 1,622,725,036 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	13.75%
	Charles Schwab & Co., Inc., San Francisco, CA	10.41%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	30.03%
	National Financial Services LLC, Jersey City, NJ	17.33%

### Vanguard Long-Term Treasury Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,202,074,268 and 366,721,514 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	US Bank N.A., FBO Capino, Milwaukee, WI	9.97%
	National Financial Services LLC, Jersey City, NJ	6.31%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.20%
Investor Shares	Variable Annuity Life Insurance Company, Houston, TX	18.67%
	National Financial Services LLC, Jersey City, NJ	10.17%
	Charles Schwab & Co., Inc., San Francisco, CA	8.58%
	Morgan Stanley Smith Barney, New York, NY	5.46%

### Vanguard Long-Term Treasury Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$19,739,193,478 and 445,272,176 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	12.44%
ETF Shares	J.P. Morgan Clearing Corp.	15.24%
	Charles Schwab & Co., Inc.	13.90%
	Ameriprise Advisor Services, Inc.	9.75%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	9.51%
	National Financial Services LLC	7.56%
	Pershing LLC	7.15%
	J.P. Morgan Chase Bank, N.A.	5.16%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	46.11%
	Northern Trust, FBO Willis Towers Watson Savings Plan for Employees - DV, Chicago, IL	5.52%
	Brown Brothers Harriman & Co., Bank Lombard Odier & Co., Ltd. Swiss Pension, New York, NY	5.03%

### Vanguard Market Liquidity Fund

- A series of Vanguard CMT Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$80,622,291,935 and 749,494,322 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Market Neutral Fund

- A series of Vanguard Montgomery Funds (FYE 12/31).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$490,148,269 and 34,035,985 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	National Financial Services LLC, Jersey City, NJ	76.07%
	US Bank N.A., FBO Capino, Milwaukee, WI	23.19%
Investor Shares	National Financial Services LLC, Jersey City, NJ	12.70%

### Vanguard Massachusetts Tax-Exempt Fund

- A series of Vanguard Massachusetts Tax-Exempt Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$2,914,290,587 and 282,226,231 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	National Financial Services LLC, Jersey City, NJ	28.24%
	Charles Schwab & Co., Inc., San Francisco, CA	13.60%

### Vanguard Materials Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,351,252,723 and 26,352,485 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	24.03%
	US Bank N.A., FBO Capino, Milwaukee, WI	10.59%
ETF Shares	Charles Schwab & Co., Inc.	23.58%
	Vanguard Marketing Corporation	16.77%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	12.45%
	National Financial Services LLC	11.18%
	Pershing LLC	7.33%

### Vanguard Mega Cap Growth Index Fund

- A series of Vanguard World Fund (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$23,010,662,522 and 71,403,121 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	National Financial Services LLC	22.82%
	Charles Schwab & Co., Inc.	18.28%
	Vanguard Marketing Corporation	14.29%
	Pershing LLC	8.06%
	Morgan Stanley DW Inc.	6.50%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	5.40%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Chengwen C. Wang, Covina, CA	36.93%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	24.55%
	Reliance Trust Company, FBO Jockey International Inc., Atlanta, GA	22.55%
	National Financial Services LLC, Jersey City, NJ	14.53%

### Vanguard Mega Cap Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$6,427,628,269 and 30,572,261 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	28.05%
	National Financial Services LLC	15.53%
	Vanguard Marketing Corporation	11.47%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	7.68%
Institutional Shares	State Street Bank and Trust Company, FBO Liberty Energy Utilities DB Plan, Overland Park, KS	45.43%
	Community Foundation of New Jersey Balance Portfolio Pool, Morristown, NJ	15.44%
	SEI Private Trust Company, Principal Financial, Oaks, PA	10.58%
	Federation of State Boards of Physical Therapy, Alexandria, VA	8.31%

### Vanguard Mega Cap Value Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$8,617,704,889 and 66,626,893 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	National Financial Services LLC	33.57%
	Charles Schwab & Co., Inc.	16.30%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	8.18%
	Morgan Stanley DW Inc.	6.66%
Institutional Shares	Vanguard Marketing Corporation	5.74%
	Cincinnati Bengals Inc., Cincinnati, OH	10.75%
	National Financial Services LLC, Jersey City, NJ	9.28%

### Vanguard Mid-Cap Growth Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Frontier Capital Management Co., LLC; Wellington Management Company LLP.
- Net assets of \$3,089,472,656 and 116,633,989 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.98%
	National Financial Services LLC, Jersey City, NJ	6.89%

### Vanguard Mid-Cap Growth Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$26,360,462,187 and 174,594,004 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.13%
ETF Shares	National Financial Services LLC	23.33%
	Charles Schwab & Co., Inc.	21.13%
	Morgan Stanley DW Inc.	7.36%
	Vanguard Marketing Corporation	7.12%
	Pershing LLC	5.45%
	Edward D. Jones & Co.	5.05%

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	77.53%
	Georgetown University Retirement Plan, Washington, DC	12.57%

### Vanguard Mid-Cap Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$175,628,821,843 and 848,517,654 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	12.45%
	National Financial Services LLC, Jersey City, NJ	5.83%
ETF Shares	Charles Schwab & Co., Inc.	20.07%
	National Financial Services LLC	10.75%
	Edward D. Jones & Co.	9.20%
	First Clearing, LLC	6.86%
	UBS Financial Services LLC	5.54%
Institutional Plus Shares	Vanguard Marketing Corporation	5.41%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	20.54%
	Mac and Company-BNY Mellon, A/C 489031, Pittsburgh, PA	15.63%
	Northern Trust, FBO New York College Savings Plan Mid-Cap Stock Index Portfolio, Newton, MA	9.07%
Institutional Shares	Northern Trust, FBO Accenture United States 401(K) Match and Savings Plan, Chicago, IL	7.30%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	14.43%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.64%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	35.51%

### Vanguard Mid-Cap Value Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$31,155,483,873 and 259,511,359 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	16.57%
	National Financial Services LLC, Jersey City, NJ	7.42%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.20%
ETF Shares	Charles Schwab & Co., Inc.	23.98%
	National Financial Services LLC	19.11%
	Morgan Stanley DW Inc.	7.36%
	Edward D. Jones & Co.	6.40%
Investor Shares	Vanguard Marketing Corporation	5.16%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	86.12%

### Vanguard Mortgage-Backed Securities Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$19,742,042,678 and 456,543,505 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	31.25%
	Charles Schwab & Co., Inc., San Francisco, CA	18.53%
	SEI Private Trust Company, Truist, Oaks, PA	11.81%
ETF Shares	Charles Schwab & Co., Inc.	42.20%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	18.62%
	National Financial Services LLC	9.42%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	62.24%
	Pershing LLC, Jersey City, NJ	27.56%
	Government Employees Health Association Inc., Lees Summit, MO	5.20%

### Vanguard Multi-Sector Income Bond Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$206,253,365 and 12,381,689 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Municipal Low Duration Fund

- A series of Vanguard CMT Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,209,237,963 and 341,655,097 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard Intermediate-Term Tax-Exempt Fund, Valley Forge, PA	27.78%
	Vanguard High-Yield Tax-Exempt Fund, Valley Forge, PA	19.10%
	Vanguard Limited-Term Tax-Exempt Fund, Valley Forge, PA	17.92%
	Vanguard Long-Term Tax-Exempt Fund, Valley Forge, PA	15.27%

### Vanguard Municipal Money Market Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$17,673,859,315 and 17,670,988,528 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard New Jersey Long-Term Tax-Exempt Fund

- A series of Vanguard New Jersey Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$2,583,459,607 and 223,158,452 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.12%
Investor Shares	National Financial Services LLC, Jersey City, NJ	25.19%
	Charles Schwab & Co., Inc., San Francisco, CA	22.39%
	Merrill Lynch Pierce Fenner & Smith Inc., Jacksonville, FL	5.94%

### Vanguard New York Long-Term Tax-Exempt Fund

- A series of Vanguard New York Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,102,932,992 and 461,209,530 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.88%
	National Financial Services LLC, Jersey City, NJ	6.11%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	33.36%
	National Financial Services LLC, Jersey City, NJ	21.40%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	5.58%

### Vanguard New York Municipal Money Market Fund

- A series of Vanguard New York Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,175,067,326 and 3,174,752,461 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Ohio Long-Term Tax-Exempt Fund

- A series of Vanguard Ohio Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$1,325,227,080 and 111,516,830 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.14%
	National Financial Services LLC, Jersey City, NJ	8.21%

### Vanguard Pacific Stock Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$10,572,704,380 and 157,158,800 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.91%
	Vanguard Variable Insurance Funds Total	5.16%
	International Stock Market Index Portfolio, Valley Forge, PA	

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	National Financial Services LLC	16.58%
	Charles Schwab & Co., Inc.	16.09%
	Citibank, N.A.	15.66%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	6.59%
	Vanguard Marketing Corporation	6.48%
	Morgan Stanley DW Inc.	6.45%
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	26.85%
	J.P. Morgan Chase Bank N.A., Vanguard Charitable Program Pacific Stock Pool, Brooklyn, NY	8.88%
Investor Shares	Shartsis Friese LLP Profit Sharing/401(K) Plan, San Francisco, CA	17.91%
	Brightsphere Inc. Profit Sharing and 401(K) Plan, Boston, MA	12.38%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	11.17%
	QRM 401(K) Retirement Savings Plan, Chicago, IL	10.72%
	Intercity Transit Employees' Retirement Plan and Trust, Olympia, WA	6.81%
	Aerospace Voluntary Annuity/Account Program, Los Angeles, CA	6.40%
	Savings Plan for Employees of The Olayan Group, New York, NY	5.16%

### Vanguard Pennsylvania Long-Term Tax-Exempt Fund

- A series of Vanguard Pennsylvania Tax-Free Funds (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$3,756,351,495 and 341,941,069 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	21.65%
	National Financial Services LLC, Jersey City, NJ	16.81%

### Vanguard PRIMECAP Core Fund

- A series of Vanguard Fenway Funds (FYE 9/30).
- Advised by PRIMECAP Management Company.
- Net assets of \$13,167,887,041 and 360,999,138 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	8.31%

### Vanguard PRIMECAP Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by PRIMECAP Management Company.
- Net assets of \$78,333,521,246 and 432,656,839 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.25%
	Fedex Corporation Retirement Savings Plan, Memphis, TN	5.95%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	27.98%
	National Financial Services LLC, Jersey City, NJ	9.49%

### Vanguard Real Estate Index Fund

- A series of Vanguard Specialized Funds (FYE 1/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$71,507,982,355 and 1,066,736,650 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.40%
ETF Shares	Charles Schwab & Co., Inc.	25.69%
	National Financial Services LLC	13.15%
	Pershing LLC	7.97%
	Vanguard Marketing Corporation	7.25%
Institutional Shares	TIAA Trust, N.A., Charlotte, NC	18.28%
	Charles Schwab & Co., Inc., San Francisco, CA	9.98%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.79%

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	41.77%
	Georgetown University Retirement Plan, Washington, DC	5.72%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	5.41%

### Vanguard Real Estate II Index Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$10,038,821,121 and 428,827,771 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	Vanguard REIT Index Fund, Valley Forge, PA	97.16%

### Vanguard Russell 1000 Growth Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$30,381,109,211 and 243,619,661 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	National Financial Services LLC	15.65%
	Charles Schwab & Co., Inc.	15.35%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	13.23%
	UBS Financial Services LLC	10.01%
	Vanguard Marketing Corporation	7.66%
Institutional Shares	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	33.22%
	National Financial Services LLC, Jersey City, NJ	8.21%
	Mg Trust Company - Matrix, FBO Phx- Oneamerica (Wi Office), Phoenix, AZ	6.36%

### Vanguard Russell 1000 Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$7,503,315,348 and 24,499,834 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	25.06%
	Vanguard Marketing Corporation	14.17%
	National Financial Services LLC	9.45%
	UBS Financial Services LLC	6.72%
	State Street Bank and Trust Company	6.50%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	32.08%
	SEI Private Trust Company, Principal Financial, Oaks, PA	10.28%
	US Bank N.A., FBO Capino, Milwaukee, WI	10.15%
	Northern Trust, FBO The Confederate Tribes of The Grand Ronde Community of Oregon, Chicago, IL	6.48%

### Vanguard Russell 1000 Value Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$10,948,957,828 and 118,110,838 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	UBS Financial Services LLC	20.71%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	19.64%
	Charles Schwab & Co., Inc.	12.09%
	National Financial Services LLC	10.79%
	Morgan Stanley DW Inc.	6.21%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	21.49%
	SEI Private Trust Company, Principal Financial, Oaks, PA	12.88%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	8.26%
	PNC Bank, N.A., Saxon & Co., Cleveland, OH	5.63%
	US Bank N.A., FBO Capino, Milwaukee, WI	5.50%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	5.37%



### Vanguard Russell 2000 Growth Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,286,197,602 and 5,598,100 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	20.96%
	National Financial Services LLC	14.29%
	Vanguard Marketing Corporation	12.86%
	Pershing LLC	8.88%
	The Bank of New York Mellon	7.86%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	7.10%
	Morgan Stanley DW Inc.	5.32%
Institutional Shares	Union Bank and Trust, FBO Nebraska Educational Savings, Lincoln, NE	18.99%
	John Hancock Trust Company LLC, Boston, MA	16.80%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	15.32%
	SEI Private Trust Company, M&T Bank, Oaks, PA	13.31%
	SEI Private Trust Company, Regions Bank, Oaks, PA	6.71%
	National Financial Services LLC, Jersey City, NJ	6.65%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	5.39%
	Principal Life Insurance Company, Des Moines, IA	5.32%

### Vanguard Russell 2000 Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$12,301,227,682 and 133,343,986 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Merrill Lynch, Pierce, Fenner & Smith Inc.	20.68%
	Charles Schwab & Co., Inc.	11.32%
	UBS Financial Services LLC	10.06%
	The Bank of New York Mellon	9.94%
	National Financial Services LLC	9.04%
	Edward D. Jones & Co.	6.92%
	Vanguard Marketing Corporation	5.00%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	24.16%
	US Bank N.A., FBO Capino, Milwaukee, WI	10.51%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	9.97%
	Voya Retirement Insurance and Annuity Company, FBO Core Market Retirement Plans, Braintree, MA	6.94%
	Crowe LLP Retirement Plan, South Bend, IN	6.32%
	PNC Bank, N.A., Saxon & Co., Cleveland, OH	5.30%

### Vanguard Russell 2000 Value Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$916,144,000 and 5,901,359 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	24.79%
	National Financial Services LLC	17.87%
	Vanguard Marketing Corporation	13.43%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	9.40%
	Pershing LLC	5.12%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	National Financial Services LLC, Jersey City, NJ	42.93%
	John Hancock Trust Company LLC, Boston, MA	35.88%
	State Street Bank and Trust Company, Transamerica Retirement Solutions Corporation Omnibus Account, Harrison, NY	15.43%
	Charles Schwab & Co., Inc., San Francisco, CA	5.75%

### Vanguard Russell 3000 Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,060,112,109 and 13,336,891 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	22.28%
	The Bank of New York Mellon	17.34%
	Northern Trust Company	10.89%
	National Financial Services LLC	10.32%
	Vanguard Marketing Corporation	5.88%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	34.58%
	Sutter Insurance Services Corporation, Honolulu, HI	9.80%
	Commerce Bank, Mori & Co., Kansas City, MO	7.01%
	SEI Private Trust Company, Principal Financial, Oaks, PA	6.45%
	US Bank N.A., FBO Capino, Milwaukee, WI	5.71%

### Vanguard S&P 500 Growth Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$13,018,084,859 and 37,683,021 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	22.66%
	Vanguard Marketing Corporation	19.75%
	National Financial Services LLC	15.63%
	Morgan Stanley DW Inc.	6.33%
	J.P. Morgan Chase Bank, N.A.	6.12%
Institutional Shares	Merrill Lynch, Pierce, Fenner & Smith Inc.	5.94%
	Timothy Rossetti, Blue Bell, PA	78.80%
	Partha Ghosh, Sewickley, PA	6.86%
	David Oshea, Media, PA	6.57%

### Vanguard S&P 500 Value Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$5,545,116,925 and 28,202,757 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	21.97%
	National Financial Services LLC	17.12%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	11.19%
	Vanguard Marketing Corporation	9.61%
	Morgan Stanley DW Inc.	7.71%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	41.42%
	Interactive Broker LLC, Greenwich, CT	26.66%
	Charles Schwab & Co., Inc., San Francisco, CA	10.19%
	US Bank N.A., FBO Band & Co., Milwaukee, WI	5.24%

### Vanguard S&P Mid-Cap 400 Growth Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,256,449,795 and 9,837,023 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	27.84%
	Vanguard Marketing Corporation	27.54%
	National Financial Services LLC	13.88%
Institutional Shares	John Hancock Trust Company LLC, Boston, MA	27.54%
	Charles Schwab & Co., Inc., San Francisco, CA	15.22%
	US Bank N.A., FBO Capino, Milwaukee, WI	14.52%
	ICMA Retirement Corporation, Washington, DC	13.57%
	Clemson University Mini Pool, Clemson University Foundation, Clemson, SC	8.95%
	Reliance Trust Company, FBO Virginia Hospital Center 401(K), Atlanta, GA	8.06%

### Vanguard S&P Mid-Cap 400 Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$3,778,496,033 and 24,944,408 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	18.69%
	National Financial Services LLC	14.51%
	Vanguard Marketing Corporation	11.67%
	Morgan Stanley DW Inc.	7.82%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	6.13%
	Pershing LLC	5.68%
	State Street Bank and Trust Company	5.02%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	22.55%
	Charles Schwab & Co., Inc., San Francisco, CA	10.56%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	8.58%
	Principal Life Insurance Company, Des Moines, IA	6.17%

### Vanguard S&P Mid-Cap 400 Value Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,046,577,950 and 9,993,479 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	27.74%
	Vanguard Marketing Corporation	20.11%
	National Financial Services LLC	13.53%
	SEI Private/Gwp	8.66%
Institutional Shares	Reliance Trust Company, FBO Expeditors International of Washington, Atlanta, GA	28.80%
	Voya Retirement Insurance and Annuity Company, FBO Arvest, Braintree, MA	24.11%
	Reliance Trust Company, FBO Comerica EB R/R, Atlanta, GA	18.87%
	The Peddie School, Hightstown, NJ	9.23%
	Charles Schwab & Co., Inc., San Francisco, CA	7.12%
	Ascensus Trust Company, FBO Omnibus Various Retirement Accounts, Fargo, ND	6.17%

### Vanguard S&P Small-Cap 600 Growth ETF

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$990,349,620 and 8,260,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	23.65%
	Vanguard Marketing Corporation	15.69%
	National Financial Services LLC	13.06%
	J.P. Morgan Chase Bank, N.A.	9.49%
	Ameriprise Advisor Services, Inc.	6.31%
	Morgan Stanley DW Inc.	6.23%

### Vanguard S&P Small-Cap 600 Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$4,931,008,909 and 32,026,985 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	23.57%
	National Financial Services LLC	16.01%
	Vanguard Marketing Corporation	11.56%
	Pershing LLC	9.89%
	Morgan Stanley DW Inc.	6.17%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	6.03%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	19.51%
	TIAA Trust, N.A., Charlotte, NC	7.86%
	Principal Life Insurance Company, Des Moines, IA	7.08%
	Empower Annuity Insurance Company of America, FBO TexaSavers 401K Plan, Greenwood Village, CO	6.63%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.31%
	US Bank N.A., FBO Capino, Milwaukee, WI	5.13%

### Vanguard S&P Small-Cap 600 Value Index Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,439,999,231 and 15,199,245 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	31.81%
	Vanguard Marketing Corporation	20.63%
	National Financial Services LLC	14.90%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Gordon Irlam, Los Altos, CA	20.15%
	Mac and Company-BNY Mellon, A/C 647817, Pittsburgh, PA	18.84%
	National Financial Services LLC, Jersey City, NJ	18.50%
	Mid Atlantic Clearing and Settlement Corporation, FBO Matc Omnibus Div Reinvest Ltcg, Pittsburgh, PA	14.40%
	Lincoln Retirement Services Company LLC, FBO Sauk Prairie Tax Def, Fort Wayne, IN	13.01%
	Empower Annuity Insurance Company of America, FBO Orrick Herrington & Sutcliffe, Greenwood Village, CO	8.58%
	Principal Life Insurance Company, Des Moines, IA	5.47%

### Vanguard Selected Value Fund

- A series of Vanguard Whitehall Funds (FYE 10/31).
- Advised by Cooke & Bieler, LP; Donald Smith & Co., Inc.; Pzena Investment Management, LLC.
- Net assets of \$7,141,212,880 and 222,795,076 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.18%
	National Financial Services LLC, Jersey City, NJ	6.96%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	6.08%

### Vanguard Short Duration Tax-Exempt Bond ETF<sup>10</sup>

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- No net assets or outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

<sup>10</sup> Vanguard Short Duration Tax-Exempt Bond ETF commenced operations on November 21, 2024.

### Vanguard Short-Term Bond Index Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$59,338,762,121 and 2,891,209,745 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	19.11%
	National Financial Services LLC, Jersey City, NJ	9.29%
ETF Shares	Charles Schwab & Co., Inc.	27.35%
	National Financial Services LLC	16.32%
	Morgan Stanley DW Inc.	8.15%
	Pershing LLC	7.76%
Institutional Plus Shares	Charles Schwab & Co., Inc., San Francisco, CA	16.47%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	11.23%
	State Farm 401K Savings Plan, Bloomington, IL	11.19%
	Merrill Lynch Pierce Fenner & Smith Inc., Jacksonville, FL	9.54%
	Teachers Retirement System of The City of New York, New York, NY	6.25%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	14.26%
	TIAA Trust, N.A., Charlotte, NC	9.72%
	US Bank N.A., FBO Capino, Milwaukee, WI	7.85%
	Charles Schwab & Co., Inc., San Francisco, CA	5.53%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.42%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	50.93%
	Bridge, Structural, Ornamental & Reinforcing Ironworkers Local 207, Youngstown, OH	7.42%
	Merganser Capital Management Inc. 401(K) Plan, Boston, MA	5.07%

### Vanguard Short-Term Corporate Bond Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$42,399,801,817 and 737,707,687 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	18.76%
	National Financial Services LLC, Jersey City, NJ	13.04%
ETF Shares	Charles Schwab & Co., Inc.	21.62%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	11.93%
	J.P. Morgan Chase Bank, N.A.	9.06%
	National Financial Services LLC	7.81%
	The Bank of New York Mellon	6.61%
Institutional Shares	Morgan Stanley DW Inc.	5.58%
	National Financial Services LLC, Jersey City, NJ	34.02%
	The University of South Florida Board of Trustees, Tampa, FL	22.38%
	Mac and Company-BNY Mellon, A/C 852630, Pittsburgh, PA	5.71%
	SEI Private Trust Company, Principal Financial, Oaks, PA	5.51%
	Pershing LLC, Jersey City, NJ	5.22%

### Vanguard Short-Term Federal Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$4,489,161,082 and 436,813,655 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	19.73%
	National Financial Services LLC, Jersey City, NJ	10.16%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	23.26%
	National Financial Services LLC, Jersey City, NJ	9.12%

### Vanguard Short-Term Inflation-Protected Securities Index Fund

- A series of Vanguard Malvern Funds (FYE 9/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$54,073,250,155 and 1,958,931,585 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Vanguard Target Retirement Income Fund, Valley Forge, PA	28.72%
	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	24.11%
	Vanguard Target Retirement 2020 Fund, Valley Forge, PA	22.96%
ETF Shares	Charles Schwab & Co., Inc.	30.01%
	National Financial Services LLC	14.34%
	J.P. Morgan Clearing Corp.	8.68%
	Vanguard Marketing Corporation	7.19%
Institutional Shares	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	23.59%
	Vanguard Target Retirement 2020 Trust, Valley Forge, PA	19.84%
	Vanguard Target Retirement Income Trust, Valley Forge, PA	18.45%
	National Financial Services LLC, Jersey City, NJ	5.23%
Investor Shares	Ascensus Trust Company, FBO Vanguard Direct Frontier Trust Company, Fargo, ND	52.85%
	The National Mutual Insurance Company 401(K) Savings Plan and MPP Plan, Celina, OH	22.89%
	Aerospace Voluntary Annuity/Account Program, Los Angeles, CA	15.05%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	9.22%

### Vanguard Short-Term Investment-Grade Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$55,242,169,884 and 5,281,537,618 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.56%
	National Financial Services LLC, Jersey City, NJ	7.84%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.08%
	Vanguard Group Inc., Malvern, PA	12.09%
	National Financial Services LLC, Jersey City, NJ	12.09%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	47.49%
	Charles Schwab & Co., Inc., San Francisco, CA	14.18%
	National Financial Services LLC, Jersey City, NJ	7.62%

### Vanguard Short-Term Tax-Exempt Bond ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$522,894,836 and 5,150,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	41.26%
	Vanguard Marketing Corporation	21.61%
	National Financial Services LLC	17.35%

### Vanguard Short-Term Treasury Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$5,745,717,803 and 576,795,556 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.16%
	National Financial Services LLC, Jersey City, NJ	7.08%
	Joel Greenberg, Gladwyne, PA	5.65%
	UFT Welfare Fund, New York, NY	5.10%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	19.56%
	National Financial Services LLC, Jersey City, NJ	11.06%

### Vanguard Short-Term Treasury Index Fund

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$25,030,138,488 and 563,078,368 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	15.54%
ETF Shares	Charles Schwab & Co., Inc.	26.39%
	National Financial Services LLC	13.98%
	Morgan Stanley DW Inc.	8.54%
	J.P. Morgan Chase Bank, N.A.	6.34%
	Pershing LLC	6.17%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	29.38%
	US Bank N.A., FBO Capino, Milwaukee, WI	22.46%
	Pershing LLC, Jersey City, NJ	6.21%

### Vanguard Small-Cap Growth Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$36,047,036,375 and 268,669,632 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	10.39%
	National Financial Services LLC, Jersey City, NJ	5.63%
ETF Shares	Charles Schwab & Co., Inc.	27.57%
	National Financial Services LLC	15.17%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	14.32%
	Vanguard Marketing Corporation	7.56%
	Morgan Stanley DW Inc.	5.22%
	Edward D. Jones & Co.	5.20%
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.55%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	13.55%
	TIAA Trust, N.A., Charlotte, NC	5.53%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	61.77%
	Amerisure Mutual Insurance Co. 401(K) Savings Plan, Farmington Hills, MI	5.71%

### Vanguard Small-Cap Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$151,736,644,041 and 992,659,706 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.59%
	National Financial Services LLC, Jersey City, NJ	6.37%
ETF Shares	Charles Schwab & Co., Inc.	26.92%
	National Financial Services LLC	12.41%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	7.89%
	Vanguard Marketing Corporation	6.63%
	Morgan Stanley DW Inc.	5.45%
	Edward D. Jones & Co.	5.22%
Institutional Plus Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	21.66%
	Northern Trust, FBO New York College Savings Plan Small-Cap Stock Index Portfolio, Newton, MA	11.41%
	Mac and Company-BNY Mellon, A/C 489032, Pittsburgh, PA	10.77%
	Northern Trust, FBO Accenture United States 401(K) Match and Savings Plan, Chicago, IL	8.18%
	Northern Trust, FBO College Savings Plan of Nevada, Boston, MA	6.99%
	TIAA Trust, N.A., Charlotte, NC	6.09%
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	15.14%
	Charles Schwab & Co., Inc., San Francisco, CA	9.07%
	TIAA Trust, N.A., Charlotte, NC	8.46%
Investor Shares	National Financial Services LLC, Jersey City, NJ	5.05%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	34.01%



### Vanguard Small-Cap Value Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$58,317,650,467 and 529,496,646 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	12.02%
	National Financial Services LLC, Jersey City, NJ	6.90%
ETF Shares	Charles Schwab & Co., Inc.	29.06%
	National Financial Services LLC	15.72%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	12.68%
	Vanguard Marketing Corporation	7.26%
	Morgan Stanley DW Inc.	5.31%
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	17.79%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	16.20%
	TIAA Trust, N.A., Charlotte, NC	11.79%
	National Financial Services LLC, Jersey City, NJ	10.05%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	39.17%

### Vanguard STAR Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$23,922,693,826 and 805,561,987 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	5.05%

### Vanguard Strategic Equity Fund

- A series of Vanguard Horizon Funds (FYE 9/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$9,054,668,401 and 226,101,285 outstanding shares.
- There were no shareholders with more than 5% record and/or beneficial ownership of this fund's shares.

### Vanguard Strategic Small-Cap Equity Fund

- A series of Vanguard Horizon Funds (FYE 9/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$1,777,212,487 and 41,586,101 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	9.72%
	National Financial Services LLC, Jersey City, NJ	8.34%

### Vanguard Target Retirement 2020 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$37,873,347,944 and 1,287,256,497 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	19.29%
	TIAA Trust, N.A., Charlotte, NC	8.26%

### Vanguard Target Retirement 2025 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$78,754,649,228 and 3,851,324,958 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	20.55%
	TIAA Trust, N.A., Charlotte, NC	6.77%
	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	5.01%

### Vanguard Target Retirement 2030 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$99,058,381,837 and 2,480,894,497 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	22.62%
	TIAA Trust, N.A., Charlotte, NC	6.76%
	Ascensus Trust Company, Vanguard House	5.38%
	Account Frontier Pro, Fargo, ND	
	Charles Schwab & Co., Inc., San Francisco, CA	5.18%

### Vanguard Target Retirement 2035 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$104,179,461,178 and 4,145,024,400 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	21.69%
	TIAA Trust, N.A., Charlotte, NC	6.90%
	Ascensus Trust Company, Vanguard House	5.59%
	Account Frontier Pro, Fargo, ND	

### Vanguard Target Retirement 2040 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$93,114,801,948 and 2,067,489,679 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	22.93%
	TIAA Trust, N.A., Charlotte, NC	7.89%
	Ascensus Trust Company, Vanguard House	5.45%
	Account Frontier Pro, Fargo, ND	
	Charles Schwab & Co., Inc., San Francisco, CA	5.30%

### Vanguard Target Retirement 2045 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$91,013,117,405 and 2,952,972,083 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	21.63%
	TIAA Trust, N.A., Charlotte, NC	7.19%
	Ascensus Trust Company, Vanguard House	5.61%
	Account Frontier Pro, Fargo, ND	

### Vanguard Target Retirement 2050 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$77,440,985,240 and 1,497,621,450 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	22.25%
	TIAA Trust, N.A., Charlotte, NC	6.70%
	Ascensus Trust Company, Vanguard House	5.74%
	Account Frontier Pro, Fargo, ND	
	Charles Schwab & Co., Inc., San Francisco, CA	5.39%

### Vanguard Target Retirement 2055 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$52,015,752,390 and 901,400,574 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	22.67%
	Ascensus Trust Company, Vanguard House	6.48%
	Account Frontier Pro, Fargo, ND	
	TIAA Trust, N.A., Charlotte, NC	5.75%

### Vanguard Target Retirement 2060 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$29,575,972,569 and 556,250,369 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	20.82%
	Ascensus Trust Company, FBO Vanguard Direct Frontier Trust Company, Fargo, ND	6.51%

### Vanguard Target Retirement 2065 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$8,842,956,608 and 253,660,328 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	17.64%
	Ascensus Trust Company, FBO Vanguard Direct Frontier Trust Company, Fargo, ND	7.40%

### Vanguard Target Retirement 2070 Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,036,098,449 and 37,566,535 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	16.07%
	Ascensus Trust Company, FBO Vanguard Direct Frontier Trust Company, Fargo, ND	10.13%
	Principal Life Insurance Company, Des Moines, IA	9.23%

### Vanguard Target Retirement Income Fund

- A series of Vanguard Chester Funds (FYE 9/30).
- Advised by Vanguard Equity Index Group.
- Net assets of \$36,539,196,583 and 2,641,973,936 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	12.56%
	TIAA Trust, N.A., Charlotte, NC	7.15%

### Vanguard Tax-Exempt Bond Index Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$37,546,189,380 and 814,864,585 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	16.56%
	Vanguard National Trust Co., El Paso, TX	5.41%
ETF Shares	Charles Schwab & Co., Inc.	25.72%
	Vanguard Marketing Corporation	11.25%
	National Financial Services LLC	11.14%
	J.P. Morgan Chase Bank, N.A.	8.63%
	Pershing LLC	7.01%

### Vanguard Tax-Managed Balanced Fund

- A series of Vanguard Tax-Managed Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group; Vanguard Fixed Income Group.
- Net assets of \$10,210,043,556 and 226,144,053 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	14.06%
	National Financial Services LLC, Jersey City, NJ	8.84%

### Vanguard Tax-Managed Capital Appreciation Fund

- A series of Vanguard Tax-Managed Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$22,864,881,577 and 88,983,053 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	8.76%
	National Financial Services LLC, Jersey City, NJ	5.52%

### Vanguard Tax-Managed Small-Cap Fund

- A series of Vanguard Tax-Managed Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$9,581,879,798 and 100,897,773 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	9.54%
	National Financial Services LLC, Jersey City, NJ	6.45%
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	13.80%
	National Financial Services LLC, Jersey City, NJ	13.21%

### Vanguard Total Bond Market Index Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$343,406,692,360 and 24,333,676,035 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.74%
ETF Shares	Vanguard Marketing Corporation	26.24%
	Charles Schwab & Co., Inc.	18.91%
	Pershing LLC	8.89%
	National Financial Services LLC	8.41%
	Morgan Stanley DW Inc.	7.69%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	TIAA Trust, N.A., Charlotte, NC	10.96%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	10.51%
	Charles Schwab & Co., Inc., San Francisco, CA	8.85%
	Mac and Company-BNY Mellon, A/C 448193, Pittsburgh, PA	5.56%
Institutional Select Shares	Northern Trust, FBO Vanguard Fiduciary Trust Company Institutional Total Bond Market Index Trust, Valley Forge, PA	82.80%
Institutional Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	11.50%
	TIAA Trust, N.A., Charlotte, NC	8.98%
	Charles Schwab & Co., Inc., San Francisco, CA	7.94%
	National Financial Services LLC, Jersey City, NJ	5.62%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	16.09%

### Vanguard Total Bond Market II Index Fund

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$307,551,772,510 and 31,554,139,696 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Vanguard Target Retirement 2030 Trust, Valley Forge, PA	17.96%
	Vanguard Target Retirement 2035 Trust, Valley Forge, PA	15.57%
	Vanguard Target Retirement 2025 Trust, Valley Forge, PA	13.70%
	Vanguard Target Retirement 2040 Trust, Valley Forge, PA	10.85%
	Vanguard Target Retirement 2045 Trust, Valley Forge, PA	7.51%
	Vanguard Target Retirement 2020 Trust, Valley Forge, PA	6.68%
	Vanguard Target Retirement Income Trust, Valley Forge, PA	5.32%

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard Target Retirement 2030 Fund, Valley Forge, PA	17.73%
	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	15.19%
	Vanguard Target Retirement 2035 Fund, Valley Forge, PA	14.95%
	Vanguard Target Retirement 2040 Fund, Valley Forge, PA	10.02%
	Vanguard Target Retirement Income Fund, Valley Forge, PA	8.96%
	Vanguard Target Retirement 2020 Fund, Valley Forge, PA	8.56%
	Vanguard Target Retirement 2045 Fund, Valley Forge, PA	6.67%

#### Vanguard Total Corporate Bond ETF

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$1,083,205,449 and 13,660,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	21.47%
	Vanguard Marketing Corporation	14.01%
	National Financial Services LLC	13.91%
	Northern Trust Company	13.28%
	LPL Financial Corporation	6.27%
	UBS Financial Services LLC	5.43%

#### Vanguard Total International Bond Index Fund

- A series of Vanguard Charlotte Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$98,328,118,629 and 2,857,245,131 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	18.22%
ETF Shares	Vanguard Marketing Corporation	40.32%
	J.P. Morgan Clearing Corp.	16.44%
	Merrill Lynch, Pierce, Fenner & Smith Inc.	8.84%
	Charles Schwab & Co., Inc.	7.19%
	National Financial Services LLC	5.83%
	JPMorgan Chase Bank, N.A.	5.57%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	41.70%
	Johnsonville Profit Sharing and 401K Plan, Sheboygan Falls, WI	8.98%
	University of Minnesota Optional Retirement Plan, Minneapolis, MN	5.10%

### Vanguard Total International Bond II Index Fund

- A series of Vanguard Charlotte Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$124,076,480,440 and 5,075,209,795 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Shares	Vanguard Target Retirement 2030 Trust, Valley Forge, PA	10.38%
	Vanguard Target Retirement 2030 Fund, Valley Forge, PA	9.56%
	Vanguard Target Retirement 2035 Trust, Valley Forge, PA	8.98%
	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	8.29%
	Vanguard Target Retirement 2035 Fund, Valley Forge, PA	8.07%
	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	8.02%
	Vanguard Target Retirement 2040 Trust, Valley Forge, PA	6.32%
	Vanguard Target Retirement 2040 Fund, Valley Forge, PA	5.49%
Investor Shares	Vanguard Life Strategy Moderate Growth Fund, Valley Forge, PA	38.31%
	Vanguard Life Strategy Conservative Growth Fund, Valley Forge, PA	27.88%
	Vanguard Life Strategy Growth Fund, Valley Forge, PA	19.32%
	Vanguard Life Strategy Income Fund, Valley Forge, PA	14.51%

### Vanguard Total International Stock Index Fund

- A series of Vanguard STAR Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$463,332,826,662 and 14,464,016,700 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	5.89%
ETF Shares	Vanguard Marketing Corporation	60.10%
	Charles Schwab & Co., Inc.	11.78%
	National Financial Services LLC	7.22%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	National Financial Services LLC, Jersey City, NJ	14.16%
	TIAA Trust, N.A., Charlotte, NC	6.72%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.39%
	SEI Private Trust Company, Principal Financial, Oaks, PA	5.37%
Institutional Select Shares	Northern Trust, FBO New York College Savings Plan, Newton, MA	14.57%
	Northern Trust, FBO College Savings Plan of Nevada, Boston, MA	5.89%
Institutional Shares	TIAA Trust, N.A., Charlotte, NC	10.63%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	10.21%
	Charles Schwab & Co., Inc., San Francisco, CA	6.48%
Investor Shares	Vanguard Target Retirement 2045 Fund, Valley Forge, PA	14.09%
	Vanguard Target Retirement 2035 Fund, Valley Forge, PA	13.40%
	Vanguard Target Retirement 2040 Fund, Valley Forge, PA	13.09%
	Vanguard Target Retirement 2050 Fund, Valley Forge, PA	13.06%
	Vanguard Target Retirement 2030 Fund, Valley Forge, PA	11.42%
	Vanguard Target Retirement 2055 Fund, Valley Forge, PA	8.76%
	Vanguard Target Retirement 2025 Fund, Valley Forge, PA	7.64%

### Vanguard Total Stock Market Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,750,631,322,372 and 8,364,248,126 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.14%
	National Financial Services LLC, Jersey City, NJ	5.02%
ETF Shares	Vanguard Marketing Corporation	29.47%
	Charles Schwab & Co., Inc.	18.52%
	National Financial Services LLC	12.60%

Title of Class	Name and Address of Shareholder	Percent of Class
Institutional Plus Shares	Vanguard Target Retirement 2045 Trust, Valley Forge, PA	7.52%
	Vanguard Target Retirement 2050 Trust, Valley Forge, PA	7.33%
	Vanguard Target Retirement 2040 Trust, Valley Forge, PA	6.90%
	Vanguard Target Retirement 2035 Trust, Valley Forge, PA	6.70%
	Vanguard Target Retirement 2045 Fund, Valley Forge, PA	6.42%
	Vanguard Target Retirement 2040 Fund, Valley Forge, PA	6.04%
	Vanguard Target Retirement 2035 Fund, Valley Forge, PA	6.04%
	Vanguard Target Retirement 2050 Fund, Valley Forge, PA	5.80%
	Vanguard Target Retirement 2030 Trust, Valley Forge, PA	5.51%
	Vanguard Target Retirement 2055 Trust, Valley Forge, PA	5.36%
	Vanguard Target Retirement 2030 Fund, Valley Forge, PA	5.09%
	Institutional Select Shares	Northern Trust, FBO Vanguard Fiduciary Trust Company Institutional Total Stock Market Index Trust, Valley Forge, PA
J.P. Morgan Chase Bank N.A., Vanguard Charitable Program Total Us Stock Pool, Brooklyn, NY		5.12%
Kaiser Permanente 401K Retirement Plan (KP401K), Oakland, CA		5.05%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	9.00%
	Charles Schwab & Co., Inc., San Francisco, CA	6.22%
Investor Shares	Vanguard Life Strategy Growth Fund, Valley Forge, PA	48.19%
	Vanguard Life Strategy Moderate Growth Fund, Valley Forge, PA	35.27%
	Vanguard Life Strategy Conservative Growth Fund, Valley Forge, PA	11.33%

### Vanguard Total World Bond ETF

- A series of Vanguard Scottsdale Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$836,858,569 and 11,860,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	26.42%
	Vanguard Marketing Corporation	13.45%
	National Financial Services LLC	11.53%
	J.P. Morgan Chase Bank, N.A.	8.87%
	Bnppar/Ind	6.88%
	Ridge Clearing & Outsourcing Solutions, Inc.	5.72%

### Vanguard Total World Stock Index Fund

- A series of Vanguard International Equity Index Funds (FYE 10/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$53,857,808,782 and 546,398,690 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	8.22%
	National Financial Services LLC, Jersey City, NJ	7.83%
ETF Shares	Charles Schwab & Co., Inc.	15.71%
	National Financial Services LLC	11.19%
	Vanguard Marketing Corporation	7.56%
	Interactive Broker LLC	6.83%
Institutional Shares	National Financial Services LLC, Jersey City, NJ	19.89%
	US Bank N.A., FBO Capino, Milwaukee, WI	9.15%
	TIAA Trust, N.A., Charlotte, NC	5.55%



### Vanguard Treasury Money Market Fund

- A series of Vanguard Admiral Funds (FYE 8/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$81,223,283,679 and 81,228,176,161 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	14.69%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	5.61%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	5.02%

### Vanguard U.S. Growth Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Baillie Gifford Overseas Ltd.; Jennison Associates LLC; Wellington Management Company LLP.
- Net assets of \$46,169,811,787 and 342,523,913 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	10.51%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	28.66%
	Vanguard Diversified Equity Fund, Valley Forge, PA	8.78%
	Charles Schwab & Co., Inc., San Francisco, CA	5.53%
	Ascensus Trust Company, FBO Omnibus Reinvest, Fargo, ND	5.20%

### Vanguard U.S. Minimum Volatility ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$137,926,981 and 1,135,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	38.48%
	Vanguard Marketing Corporation	18.49%
	National Financial Services LLC	12.91%
	Raymond, James & Associates, Inc.	6.56%
	LPL Financial Corporation	5.05%

### Vanguard U.S. Momentum Factor ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$664,527,481 and 4,135,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	50.41%
	Vanguard Marketing Corporation	14.06%
	National Financial Services LLC	13.35%

### Vanguard U.S. Multifactor ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$295,941,837 and 2,270,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	31.21%
	National Financial Services LLC	20.79%
	Vanguard Marketing Corporation	20.02%
	Pershing LLC	5.48%

### Vanguard U.S. Multifactor Fund

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$148,253,906 and 3,500,047 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	12.08%

### Vanguard U.S. Quality Factor ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$398,390,765 and 2,785,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	47.98%
	National Financial Services LLC	15.53%
	Vanguard Marketing Corporation	14.61%

### Vanguard U.S. Value Factor ETF

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Vanguard Quantitative Equity Group.
- Net assets of \$775,701,192 and 6,445,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Vanguard Marketing Corporation	30.85%
	Charles Schwab & Co., Inc.	25.74%
	National Financial Services LLC	24.65%
	The Bank of New York Mellon	6.63%

### Vanguard Ultra-Short Bond ETF

- A series of Vanguard Bond Index Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$4,575,427,945 and 91,600,000 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
ETF Shares	Charles Schwab & Co., Inc.	26.93%
	J.P. Morgan Clearing Corp.	22.66%
	National Financial Services LLC	11.62%
	Vanguard Marketing Corporation	9.33%
	Northern Trust Company	5.32%
	The Bank of New York Mellon	5.05%

### Vanguard Ultra-Short-Term Bond Fund

- A series of Vanguard Fixed Income Securities Funds (FYE 1/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$12,969,734,277 and 659,800,841 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	17.15%
	National Financial Services LLC, Jersey City, NJ	12.85%
	Charles Schwab & Co., Inc., San Francisco, CA	11.10%
	Vanguard Group Inc., Malvern, PA	6.12%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	23.44%
	National Financial Services LLC, Jersey City, NJ	12.83%
	J.P. Morgan Securities LLC, Omnibus Account, Brooklyn, NY	5.75%

### Vanguard Ultra-Short-Term Tax-Exempt Fund

- A series of Vanguard Municipal Bond Funds (FYE 10/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$14,555,615,491 and 918,600,932 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	25.78%
	National Financial Services LLC, Jersey City, NJ	19.07%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	33.31%
	National Financial Services LLC, Jersey City, NJ	23.01%

### Vanguard Utilities Index Fund

- A series of Vanguard World Fund (FYE 8/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$8,461,888,866 and 58,652,498 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	National Financial Services LLC, Jersey City, NJ	8.13%
ETF Shares	Charles Schwab & Co., Inc.	23.67%
	Vanguard Marketing Corporation	20.39%
	National Financial Services LLC	14.34%
	Morgan Stanley DW Inc.	6.56%
	Pershing LLC	5.86%

### Vanguard Value Index Fund

- A series of Vanguard Index Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$185,901,653,700 and 1,577,532,910 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	11.62%
	National Financial Services LLC, Jersey City, NJ	8.67%
ETF Shares	Merrill Lynch, Pierce, Fenner & Smith Inc.	18.45%
	Charles Schwab & Co., Inc.	16.81%
	National Financial Services LLC	13.66%
	Edward D. Jones & Co.	9.47%
	Morgan Stanley DW Inc.	6.15%
Institutional Shares	Charles Schwab & Co., Inc., San Francisco, CA	16.12%
	Fidelity Investments Institutional Operations Company Inc., Covington, KY	13.79%
	Northern Trust, FBO New York College Savings Plan Value Stock Index Portfolio, Newton, MA	12.99%
	TIAA Trust, N.A., Charlotte, NC	7.13%
Investor Shares	Ascensus Trust Company, Vanguard House Account Frontier Pro, Fargo, ND	60.12%

### Vanguard Variable Insurance Funds - Balanced Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$3,536,732,537 and 143,988,561 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	63.73%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	6.92%
	American Fidelity Assurance Company, Oklahoma City, OK	5.49%

### Vanguard Variable Insurance Funds - Capital Growth Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by PRIMECAP Management Company.
- Net assets of \$2,027,370,213 and 38,906,549 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	52.11%
	American Fidelity Assurance Company, Oklahoma City, OK	10.00%

### Vanguard Variable Insurance Funds - Conservative Allocation Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$483,927,058 and 19,059,728 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	71.05%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	9.24%
	Transamerica Financial Life Insurance Company, Cedar Rapids, IA	6.55%

### Vanguard Variable Insurance Funds - Diversified Value Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Hotchkis & Wiley Capital Management, LLC; Lazard Asset Management LLC.
- Net assets of \$1,387,942,369 and 83,394,248 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	41.37%
	Mid Atlantic Trust Company, FBO Mutual of America Separate Account #2, Pittsburgh, PA	24.83%
	Nationwide Life and Annuity Insurance Company, Columbus, OH	6.01%

### Vanguard Variable Insurance Funds - Equity Income Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Quantitative Equity Group; Wellington Management Company LLP.
- Net assets of \$2,179,787,005 and 86,206,244 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	44.38%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	13.21%
	Nationwide Life Insurance Company, Columbus, OH	9.46%

### Vanguard Variable Insurance Funds - Equity Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$11,141,913,198 and 158,118,196 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Vanguard Variable Insurance Funds Moderate Allocation Portfolio, Valley Forge, PA	44.47%
	Transamerica Life Insurance Company, Cedar Rapids, IA	21.63%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	5.01%

### Vanguard Variable Insurance Funds - Global Bond Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$493,844,017 and 26,264,066 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Lincoln Life & Annuity Company of New York, Fort Wayne, IN	31.03%
	Transamerica Life Insurance Company, Cedar Rapids, IA	28.24%
	Nationwide Life Insurance Company, Columbus, OH	15.39%
	Transamerica Life Insurance Company, Cedar Rapids, IA	6.72%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	5.52%

### Vanguard Variable Insurance Funds - Growth Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Wellington Management Company LLP.
- Net assets of \$1,511,074,347 and 47,253,731 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	62.59%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	13.59%
	Transamerica Financial Life Insurance Company, Cedar Rapids, IA	6.13%

### Vanguard Variable Insurance Funds - High Yield Bond Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group; Wellington Management Company LLP.
- Net assets of \$781,090,285 and 105,145,053 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	35.67%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	10.24%
	J.P. Morgan Chase Bank N.A., FBO Teachers Insurance and Annuity Association of America, New York, NY	8.72%
	Nationwide Life Insurance Company, Columbus, OH	7.89%

### Vanguard Variable Insurance Funds - International Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Baillie Gifford Overseas Ltd.; Schroder Investment Management North America Inc.
- Net assets of \$3,136,839,697 and 115,830,161 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	32.24%
	Mid Atlantic Trust Company, FBO Mutual of America Separate Account #2, Pittsburgh, PA	13.64%
	Prudential Insurance Company of America, Newark, NJ	8.94%
	Nationwide Life and Annuity Insurance Company, Columbus, OH	6.54%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	6.03%
	Talcott Resolution Life Insurance Company, Hartford, CT	5.56%

### Vanguard Variable Insurance Funds - Mid-Cap Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$2,874,891,655 and 107,536,495 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	29.71%
	Nationwide Life Insurance Company, Columbus, OH	9.63%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	7.43%
	Principal Life Insurance Company, Des Moines, IA	5.95%
	Lincoln Life & Annuity Company of New York, Fort Wayne, IN	5.95%

### Vanguard Variable Insurance Funds - Moderate Allocation Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$683,285,955 and 21,848,223 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	68.47%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	7.19%
	Transamerica Financial Life Insurance Company, Cedar Rapids, IA	5.69%

### Vanguard Variable Insurance Funds - Money Market Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$1,243,325,275 and 1,242,861,889 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	87.03%
	Transamerica Financial Life Insurance Company, Cedar Rapids, IA	6.00%

### Vanguard Variable Insurance Funds - Real Estate Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,203,007,829 and 94,567,658 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	36.26%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	10.31%
	Mid Atlantic Trust Company, FBO Mutual of America Separate Account #1, Pittsburgh, PA	8.14%
	Nationwide Life Insurance Company, Columbus, OH	7.70%
	Talcott Resolution Life Insurance Company, Hartford, CT	5.99%
	Lincoln Life & Annuity Company of New York, Fort Wayne, IN	5.67%

### Vanguard Variable Insurance Funds - Short-Term Investment-Grade Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$2,322,324,591 and 221,882,227 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	32.47%
	Nationwide Life and Annuity Insurance Company, Columbus, OH	25.30%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	14.38%

### Vanguard Variable Insurance Funds - Small Company Growth Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by ArrowMark Colorado Holdings, LLC; Vanguard Quantitative Equity Group.
- Net assets of \$1,554,295,753 and 80,434,570 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	51.25%
	Nationwide Life Insurance Company, Columbus, OH	11.20%

### Vanguard Variable Insurance Funds - Total Bond Market Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Fixed Income Group.
- Net assets of \$4,674,198,877 and 433,379,730 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	25.51%
	Vanguard Variable Insurance Funds Moderate Allocation Portfolio, Valley Forge, PA	15.76%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	15.06%
	Nationwide Life Insurance Company Columbus, OH	12.83%
	J.P. Morgan Chase Bank N.A., FBO Teachers Insurance and Annuity Association of America, New York, NY	6.99%

### Vanguard Variable Insurance Funds - Total International Stock Market Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$1,624,460,138 and 70,296,996 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Nationwide Life and Annuity Insurance Company, Columbus, OH	17.51%
	Transamerica Life Insurance Company, Cedar Rapids, IA	16.92%
	Lincoln Life & Annuity Company of New York, Fort Wayne, IN	14.36%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	11.39%
	Transamerica Life Insurance Company, Cedar Rapids, IA	10.19%
	MML Bay State Life Insurance Company, Springfield, MA	6.76%

### Vanguard Variable Insurance Funds - Total Stock Market Index Portfolio

- A series of Vanguard Variable Insurance Funds (FYE 12/31).
- Advised by Vanguard Equity Index Group.
- Net assets of \$5,314,450,357 and 97,143,716 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Transamerica Life Insurance Company, Cedar Rapids, IA	37.88%
	Nationwide Financial Services Inc., Jefferson National Life Insurance Company, Columbus, OH	11.23%
	American Fidelity Assurance Company, Oklahoma City, OK	8.60%
	Transamerica Life Insurance Company, Cedar Rapids, IA	6.14%

### Vanguard Wellesley Income Fund

- A series of Vanguard Wellesley Income Fund (FYE 9/30).
- Advised by Wellington Management Company LLP.
- Net assets of \$51,926,510,840 and 1,012,395,017 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Charles Schwab & Co., Inc., San Francisco, CA	6.61%
Investor Shares	Charles Schwab & Co., Inc., San Francisco, CA	22.34%
	National Financial Services LLC, Jersey City, NJ	19.44%

### Vanguard Wellington Fund

- A series of Vanguard Wellington Fund (FYE 11/30).
- Advised by Wellington Management Company LLP.
- Net assets of \$114,067,624,024 and 1,550,325,699 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Investor Shares	Variable Annuity Life Insurance Company, Houston, TX	14.24%
	Charles Schwab & Co., Inc., San Francisco, CA	12.96%
	National Financial Services LLC, Jersey City, NJ	11.16%

### Vanguard Windsor Fund

- A series of Vanguard Windsor Funds (FYE 10/31).
- Advised by Pzena Investment Management, LLC; Wellington Management Company LLP.
- Net assets of \$25,293,056,956 and 468,599,191 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

Title of Class	Name and Address of Shareholder	Percent of Class
Admiral Shares	Fedex Corporation Retirement Savings Plan, Memphis, TN	5.99%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	36.36%
	Vanguard Diversified Equity Fund, Valley Forge, PA	11.34%



## Vanguard Windsor II Fund

- A series of Vanguard Windsor Funds (FYE 10/31).
- Advised by Aristotle Capital Management, LLC; Hotchkis & Wiley Capital Management, LLC; Lazard Asset Management LLC; Sanders Capital, LLC.
- Net assets of \$62,415,997,323 and 823,096,161 outstanding shares.
- Shareholders with more than 5% record and/or beneficial ownership of the noted class of this fund's shares:

<b>Title of Class</b>	<b>Name and Address of Shareholder</b>	<b>Percent of Class</b>
Admiral Shares	Fidelity Investments Institutional Operations Company Inc., Covington, KY	9.46%
Investor Shares	Vanguard STAR Fund, Valley Forge, PA	28.14%
	Variable Annuity Life Insurance Company, Houston, TX	18.29%
	Charles Schwab & Co., Inc., San Francisco, CA	6.12%

## Ownership of Fund Shares

The following table shows each trustee nominee's ownership of shares of each fund and of all Vanguard funds as of September 30, 2024.

Fund	Interested Trustee		Independent Trustee					Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
<b>Vanguard 500 Index Fund</b>	Over \$100,000	\$10,001 to \$50,000	None	None	None	None	Over \$100,000	None	None	None	None	None	Over \$100,000
<b>Vanguard Advice Select Dividend Growth Fund</b>	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None	None
<b>Vanguard Advice Select Global Value Fund</b>	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None	None
<b>Vanguard Advice Select International Growth Fund</b>	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None	None
<b>Vanguard Baillie Gifford Global Positive Impact Stock Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Balanced Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard California Intermediate-Term Tax-Exempt Fund</b>	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard California Long-Term Tax-Exempt Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard California Municipal Money Market Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard California Tax-Exempt Bond ETF</b>	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Capital Opportunity Fund</b>	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None	None
<b>Vanguard Cash Reserves Federal Money Market Fund</b>	None	None	\$10,001 to \$50,000	None	None	Over \$100,000	None	\$1 to \$10,000	None	None	None	None	None
<b>Vanguard Commodity Strategy Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Communication Services Index Fund</b>	\$1 to \$10,000	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Consumer Discretionary Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Consumer Staples Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Core Bond ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Core Bond Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee		Independent Trustee						Independent Trustee				
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard Core-Plus Bond ETF	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Core-Plus Bond Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Core Tax-Exempt Bond ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Developed Markets Index Fund	None	Over \$100,000	None	None	None	None	None	None	Over \$100,000	None	None	None	None
Vanguard Diversified Equity Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Dividend Appreciation Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Dividend Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Emerging Markets Bond Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Emerging Markets Government Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Emerging Markets Select Stock Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Emerging Markets Stock Index Fund	\$50,001 to \$100,000	\$50,001 to \$100,000	None	None	None	Over \$100,000	None	Over \$100,000	\$50,001 to \$100,000	None	None	None	Over \$100,000
Vanguard Energy Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Energy Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Equity Income Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard ESG International Stock ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard ESG U.S. Corporate Bond ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard ESG U.S. Stock ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard European Stock Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Explorer Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Explorer Value Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Extended Duration Treasury Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Extended Market Index Fund	None	None	Over \$100,000	Over \$100,000	Over \$100,000	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee		Independent Trustee						Independent Trustee				
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
<b>Vanguard Federal Money Market Fund</b>	\$10,001 to \$50,000	None	Over \$100,000	\$50,001 to \$100,000	None	\$1 to \$10,000	None	None	\$10,001 to \$50,000	None	Over \$100,000	None	Over \$100,000
<b>Vanguard Financials Index Fund</b>	None	\$50,001 to \$100,000	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard FTSE All-World ex-US Index Fund</b>	None	None	Over \$100,000	None	None	Over \$100,000	None	None	None	None	None	None	None
<b>Vanguard FTSE All-World ex-US Small-Cap Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard FTSE Social Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Capital Cycles Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Credit Bond Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Environmental Opportunities Stock Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Equity Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
<b>Vanguard Global ESG Select Stock Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global ex-U.S. Real Estate Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Minimum Volatility Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Wellesley Income Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Global Wellington Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard GNMA Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Growth and Income Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Growth Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
<b>Vanguard Health Care Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Health Care Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard High Dividend Yield Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard High-Yield Corporate Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard High-Yield Tax-Exempt Fund	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
Vanguard Industrials Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Inflation-Protected Securities Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Information Technology Index Fund	\$1 to \$10,000	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Institutional Index Fund	None	None	None	Over \$100,000	None	Over \$100,000	None	None	None	None	None	None	None
Vanguard Institutional Intermediate-Term Bond Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Institutional Short-Term Bond Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Institutional Total Stock Market Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Corporate Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Investment-Grade Fund	None	Over \$100,000	Over \$100,000	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Tax-Exempt Bond ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Tax-Exempt Fund	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Intermediate-Term Treasury Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Intermediate-Term Treasury Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard International Core Stock Fund	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None	None
Vanguard International Dividend Appreciation Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard International Dividend Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard International Explorer Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard International Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

	Interested Trustee		Independent Trustee						Independent Trustee				
Fund	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard International High Dividend Yield Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard International Value Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Large-Cap Index Fund	None	None	None	None	None	None	None	None	\$1 to \$10,000	None	None	None	None
Vanguard LifeStrategy Conservative Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard LifeStrategy Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard LifeStrategy Income Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard LifeStrategy Moderate Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Limited-Term Tax-Exempt Fund	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Corporate Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Investment-Grade Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Tax-Exempt Fund	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Treasury Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Long-Term Treasury Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Market Liquidity Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Market Neutral Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Massachusetts Tax-Exempt Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Materials Index Fund	\$1 to \$10,000	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mega Cap Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mega Cap Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard Mega Cap Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mid-Cap Growth Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mid-Cap Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mid-Cap Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Mid-Cap Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Mortgage-Backed Securities Index Fund	None	None	None	None	\$10,001 to \$50,000	None	None	None	None	None	None	None	None
Vanguard Multi-Sector Income Bond Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Municipal Low Duration Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Municipal Money Market Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard New Jersey Long-Term Tax-Exempt Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard New York Long-Term Tax-Exempt Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard New York Municipal Money Market Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Ohio Long-Term Tax-Exempt Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Pacific Stock Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Pennsylvania Long-Term Tax-Exempt Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard PRIMECAP Core Fund	None	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None
Vanguard PRIMECAP Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Real Estate Index Fund	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
Vanguard Real Estate II Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 1000 Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 1000 Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)



	Interested Trustee		Independent Trustee					Independent Trustee					
Fund	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard Russell 1000 Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 2000 Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 2000 Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 2000 Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Russell 3000 Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P 500 Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P 500 Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Mid-Cap 400 Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Mid-Cap 400 Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Mid-Cap 400 Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Small-Cap 600 Growth ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Small-Cap 600 Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard S&P Small-Cap 600 Value Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Selected Value Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short Duration Tax-Exempt Bond ETF	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Bond Index Fund	None	\$10,001 to \$50,000	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Corporate Bond Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Federal Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Inflation-Protected Securities Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Investment-Grade Fund	None	Over \$100,000	Over \$100,000	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
Vanguard Short-Term Tax-Exempt Bond ETF	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Treasury Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Short-Term Treasury Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Small-Cap Growth Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Small-Cap Index Fund	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
Vanguard Small-Cap Value Index Fund	None	None	None	None	None	Over \$100,000	None	None	None	None	None	None	Over \$100,000
Vanguard STAR Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Strategic Equity Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Strategic Small-Cap Equity Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2020 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2025 Fund	None	None	None	None	None	None	None	None	None	None	\$10,001 to \$50,000	None	None
Vanguard Target Retirement 2030 Fund	None	None	None	None	None	None	None	None	None	None	Over \$100,000	None	None
Vanguard Target Retirement 2035 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2040 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2045 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2050 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2055 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2060 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2065 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement 2070 Fund	None	None	None	None	None	None	None	None	None	None	None	None	None
Vanguard Target Retirement Income Fund	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
<b>Vanguard Tax-Exempt Bond Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Tax-Managed Balanced Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Tax-Managed Capital Appreciation Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	Over \$100,000
<b>Vanguard Tax-Managed Small-Cap Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total Bond Market Index Fund</b>	\$50,001 to \$100,000	None	Over \$100,000	None	None	None	Over \$100,000	None	None	None	None	None	None
<b>Vanguard Total Bond Market II Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total Corporate Bond ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total International Bond Index Fund</b>	Over \$100,000	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total International Bond II Index Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total International Stock Index Fund</b>	Over \$100,000	None	Over \$100,000	Over \$100,000	None	Over \$100,000	Over \$100,000	None	None	None	None	None	Over \$100,000
<b>Vanguard Total Stock Market Index Fund</b>	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	None	Over \$100,000	None	None	Over \$100,000	None	None	None	Over \$100,000
<b>Vanguard Total World Bond ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Total World Stock Index Fund</b>	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	Over \$100,000
<b>Vanguard Treasury Money Market Fund</b>	None	None	None	None	None	None	None	\$1 to \$10,000	None	None	None	None	None
<b>Vanguard U.S. Growth Fund</b>	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Minimum Volatility ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Momentum Factor ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Multifactor ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Multifactor Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Quality Factor ETF</b>	\$1 to \$10,000	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard U.S. Value Factor ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
<b>Vanguard Ultra-Short Bond ETF</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Ultra-Short-Term Bond Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Ultra-Short-Term Tax-Exempt Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Utilities Index Fund</b>	\$1 to \$10,000	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Value Index Fund</b>	None	None	Over \$100,000	None	None	None	None	None	None	None	None	None	\$10,001 to \$50,000
<b>Vanguard Variable Insurance Funds - Balanced Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Capital Growth Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Conservative Allocation Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Diversified Value Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Equity Income Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Equity Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Global Bond Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Growth Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - High Yield Bond Portfolio</b>	None	Over \$100,000	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - International Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Mid-Cap Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Moderate Allocation Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None

(continued)

Fund	Interested Trustee	Independent Trustee						Independent Trustee					
	Ramji	Bunch	Loughridge	Malpass	Murphy	Pastor	Patterson	Perold	Raskin	Reid	Thomas	Venneman	Volanakis
<b>Vanguard Variable Insurance Funds - Money Market Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Real Estate Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Short-Term Investment-Grade Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Small Company Growth Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Total Bond Market Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Total International Stock Market Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Variable Insurance Funds - Total Stock Market Index Portfolio</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Wellesley Income Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Wellington Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Windsor Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Vanguard Windsor II Fund</b>	None	None	None	None	None	None	None	None	None	None	None	None	None
<b>Aggregate Dollar Range of Vanguard Fund Shares Owned</b>	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000

## Exhibits

### Exhibit A - Nominating Committee Charter

#### The Vanguard Funds Boards Of Trustees Nominating Committee Charter

##### Role of Committee

The Nominating Committee (the "Committee") will be primarily responsible for the nomination of candidates for election to the Board of Trustees (the "Fund Board") of each of the Vanguard Funds (collectively, "Vanguard Funds" and each, a "Vanguard Fund"). The Committee will also have the authority to recommend the removal of any Trustee from the Fund Board.

##### Membership of Committee

The Committee will be composed exclusively of Independent Trustees, as defined below, chosen by the Fund Board. For these purposes, an "Independent Trustee" means a Trustee on the Fund Board who is not an "interested person" as defined by the Investment Company Act of 1940, as amended (the "Investment Company Act"). Former officers and employees of the Vanguard Funds and The Vanguard Group, Inc. will not be considered Independent Trustees irrespective of whether they qualify under the Investment Company Act definition.

##### Leadership of Committee

The Lead Independent Trustee selected by the Fund Board will serve as Chairman of the Committee (the "Committee Chairman"). The Committee Chairman will call all meetings of the Committee and set the agenda for each meeting.

##### Committee Responsibilities

- The Committee will periodically review the size and composition of the Fund Board to determine whether it would be appropriate to add new members with additional backgrounds, skills and experiences. Whenever a vacancy occurs on the Fund Board, the Committee will consider whether it would be appropriate to fill that vacancy with a new Fund Board member.
- If the Committee decides to add a new member to the Fund Board, the Committee will evaluate and interview an appropriate range of candidates. The Committee will consider any candidates suggested by the Vanguard Fund's Chief Executive Officer (the "CEO"), and will give the CEO the opportunity to meet with all prospective candidates prior to any final decision by the Committee. However, control of the nomination of new Trustees will rest exclusively with the Committee. As part of this responsibility, the Committee will be responsible for conducting, subject to applicable law, any and all inquiries into the background and qualifications

of any candidate for the Fund Board and such candidate's compliance with the independence and other qualification requirements established by the Fund Board or required by law.

- In evaluating candidates for the Fund Board, the Committee should consider, among other things, a candidate's integrity, strength of character, judgment, business experience, specific areas of expertise, length of tenure, ability to devote sufficient time to attendance at and preparation for Fund Board meetings, factors relating to the composition of the Fund Board (including its size and structure) and principles of diversity.
- By vote of a majority of its members, the Committee may nominate candidates for election to the Fund Board. The election of new Board members will be accomplished by majority vote of the full Board or, where required by the Investment Company Act, by vote of Vanguard Fund shareholders.
- The Committee will periodically evaluate the performance of the incumbent Trustees on the Fund Board. By vote of a majority of its members, the Committee may recommend the removal of any Trustee from the Fund Board, with or without cause.

##### Committee Procedures

- The Committee will meet as often as the Committee or the Fund Board deems appropriate, but no less than one time per year.
- A majority of the members of the Committee will constitute a quorum. All determinations of the Committee will be made by a majority of its members present at a meeting duly called and held (or where the Committee consists of only two members, or only two members are present and constitute a quorum, by unanimous vote). Any decision or determination of the Committee reduced to writing and signed by all of the members of the Committee (including by means of electronic transmission) will be as fully effective as if such decision or determination had been made at a meeting duly called and held.
- The Committee will have direct access to, and complete and open communication with, management and may obtain advice and assistance from internal legal, accounting, or other advisors. The Committee may retain independent legal, accounting, or other advisors to assist it, and may determine compensation for such advisors, and the Vanguard Funds will be responsible for any costs or expenses so incurred.

**Other Items**

- As required by the Bylaws of the Vanguard Funds, the Committee will keep minutes of its meetings and report all actions taken by the Committee to the Fund Board.
- The Committee may delegate its authority and duties to subcommittees or individuals as it deems appropriate and in accordance with applicable laws and regulations.
- The Committee will evaluate its performance on an annual basis.
- At least annually, this charter will be reviewed and reassessed by the Committee and any proposed changes will be submitted to the Fund Board for approval.

Last Board Approval: November 2023



## Exhibit B - Boards and Committee Meetings

Trust (FYE)	Board Meetings	Audit Committee Meetings	Compensation Committee Meetings	Independent Governance Committee Meetings	Investment Committees Meetings	Nominating Committee Meetings
Vanguard Admiral Funds (8/31)	8	5	2	11	2	2
Vanguard Bond Index Funds (12/31)	10	6	5	8	2	5
Vanguard California Tax-Free Funds (11/30)	10	6	5	7	2	5
Vanguard Charlotte Funds (10/31)	9	5	3	9	2	2
Vanguard Chester Funds (9/30)	8	5	3	9	2	2
Vanguard CMT Funds (8/31)	8	5	2	11	2	2
Vanguard Explorer Fund (10/31)	9	5	3	9	2	2
Vanguard Fenway Funds (9/30)	8	5	3	9	2	2
Vanguard Fixed Income Securities Funds (1/31)	10	6	5	8	2	5
Vanguard Horizon Funds (9/30)	8	5	3	9	2	2
Vanguard Index Funds (12/31)	10	6	5	8	2	5
Vanguard Institutional Index Funds (12/31)	10	6	5	8	2	5
Vanguard International Equity Index Funds (10/31)	9	5	3	9	2	2
Vanguard Malvern Funds (9/30)	8	5	3	9	2	2
Vanguard Massachusetts Tax-Exempt Funds (11/30)	10	6	5	7	2	5
Vanguard Money Market Reserves (8/31)	8	5	2	11	2	2
Vanguard Montgomery Funds (12/31)	10	6	5	8	2	5
Vanguard Municipal Bond Funds (10/31)	9	5	3	9	2	2
Vanguard New Jersey Tax-Free Funds (11/30)	10	6	5	7	2	5
Vanguard New York Tax-Free Funds (11/30)	10	6	5	7	2	5
Vanguard Ohio Tax-Free Funds (11/30)	10	6	5	7	2	5
Vanguard Pennsylvania Tax-Free Funds (11/30)	10	6	5	7	2	5
Vanguard Quantitative Funds (9/30)	8	5	3	9	2	2
Vanguard Scottsdale Funds (8/31)	8	5	2	11	2	2
Vanguard Specialized Funds (1/31)	10	6	5	8	2	5
Vanguard STAR Funds (10/31)	9	5	3	9	2	2
Vanguard Tax-Managed Funds (12/31)	10	6	5	8	2	5
Vanguard Trustees' Equity Fund (10/31)	9	5	3	9	2	2
Vanguard Valley Forge Funds (12/31)	10	6	5	8	2	5
Vanguard Variable Insurance Funds (12/31)	10	6	5	8	2	5
Vanguard Wellesley Income Fund (9/30)	8	5	3	9	2	2
Vanguard Wellington Fund (11/30)	10	6	5	7	2	5
Vanguard Whitehall Funds (10/31)	9	5	3	9	2	2
Vanguard Windsor Funds (10/31)	9	5	3	9	2	2
Vanguard World Fund (8/31)*	8	5	2	11	2	2

\*The fiscal year-end of Vanguard Mega Cap Growth Index Fund, a series of this trust, is 9/30.

## Exhibit C - Independent Trustee Compensation

Trust (FYE)	Bunch	Loughridge	Malpass	Pastor*	Perold	Raskin	Reid**	Thomas	Volanakis
Vanguard Admiral Funds (8/31)	\$5,234	\$6,198	\$5,234	\$5,028	\$5,028	\$5,372	\$5,028	\$5,028	\$5,372
Vanguard Bond Index Funds (12/31)	42,012	50,925	42,012	0	42,012	44,559	24,007	42,012	44,559
Vanguard California Tax-Free Funds (11/30)	1,238	1,501	1,238	0	1,238	1,313	566	1,238	1,313
Vanguard Charlotte Funds (10/31)	11,017	13,051	11,017	10,582	10,582	11,307	10,582	10,582	11,307
Vanguard Chester Funds (9/30)	4,003	4,743	4,003	3,845	3,845	4,108	3,845	3,845	4,108
Vanguard CMT Funds (8/31)	0	0	0	0	0	0	0	0	0
Vanguard Explorer Fund (10/31)	1,150	1,363	1,150	1,105	1,105	1,180	1,105	1,105	1,180
Vanguard Fenway Funds (9/30)	3,713	4,396	3,713	3,566	3,566	3,810	3,566	3,566	3,810
Vanguard Fixed Income Securities Funds (1/31)	11,079	13,400	11,079	1,008	11,037	11,714	7,260	11,037	11,714
Vanguard Horizon Funds (9/30)	2,216	2,623	2,216	2,128	2,128	2,274	2,128	2,128	2,274
Vanguard Index Funds (12/31)	186,966	226,628	186,966	0	186,966	198,298	106,838	186,966	198,298
Vanguard Institutional Index Funds (12/31)	16,873	20,451	16,873	0	16,873	17,896	9,642	16,873	17,896
Vanguard International Equity Index Funds (10/31)	13,719	16,243	13,719	13,177	13,177	14,080	13,177	13,177	14,080
Vanguard Malvern Funds (9/30)	5,880	6,962	5,880	5,648	5,648	6,035	5,648	5,648	6,035
Vanguard Massachusetts Tax-Exempt Funds (11/30)	126	150	126	0	126	134	58	126	134
Vanguard Money Market Reserves (8/31)	22,231	26,325	22,231	21,354	21,354	22,816	21,354	21,354	22,816
Vanguard Montgomery Funds (12/31)	32	35	32	0	32	34	18	32	34
Vanguard Municipal Bond Funds (10/31)	10,766	12,750	10,766	10,341	10,341	11,049	10,341	10,341	11,049
Vanguard New Jersey Tax-Free Funds (11/30)	121	148	121	0	121	129	56	121	129
Vanguard New York Tax-Free Funds (11/30)	366	440	366	0	366	388	167	366	388
Vanguard Ohio Tax-Free Funds (11/30)	67	79	67	0	67	71	30	67	71
Vanguard Pennsylvania Tax-Free Funds (11/30)	184	220	184	0	184	195	84	184	195
Vanguard Quantitative Funds (9/30)	772	913	772	742	742	792	742	742	792
Vanguard Scottsdale Funds (8/31)	13,251	15,689	13,251	12,728	12,728	13,600	12,728	12,728	13,600
Vanguard Specialized Funds (1/31)	15,236	18,425	15,236	1,387	15,179	16,110	9,984	15,179	16,110
Vanguard STAR Funds (10/31)	22,806	27,005	22,806	21,906	21,906	23,406	21,906	21,906	23,406
Vanguard Tax-Managed Funds (12/31)	12,258	14,861	12,258	0	12,258	13,001	7,005	12,258	13,001
Vanguard Trustees' Equity Fund (10/31)	841	994	841	808	808	863	808	808	863
Vanguard Valley Forge Funds (12/31)	3,036	3,682	3,036	0	3,036	3,220	1,735	3,036	3,220
Vanguard Variable Insurance Funds (12/31)	2,037	2,469	2,037	0	2,037	2,160	1,164	2,037	2,160
Vanguard Wellesley Income Fund (9/30)	2,808	3,324	2,808	2,697	2,697	2,881	2,697	2,697	2,881
Vanguard Wellington Fund (11/30)	5,524	6,695	5,524	0	5,524	5,859	2,523	5,524	5,859

(continued)

Trust (FYE)	Bunch	Loughridge	Malpass	Pastor*	Perold	Raskin	Reid**	Thomas	Volanakis
Vanguard Whitehall Funds (10/31)	5,409	6,407	5,409	5,195	5,195	5,551	5,195	5,195	5,551
Vanguard Windsor Funds (10/31)	4,412	5,226	4,412	4,238	4,238	4,529	4,238	4,238	4,529
Vanguard World Fund (8/31)***	15,340	18,166	15,340	14,734	14,734	15,743	14,734	14,734	15,743

\*Mr. Pastor became a member of the funds' Boards effective January 1, 2024.

\*\*Mr. Reid became a member of the funds' Boards effective July 20, 2023.

\*\*\*The fiscal year-end of Vanguard Mega Cap Growth Index Fund, a series of this trust, is 9/30.

### Total Independent Trustee Compensation\*

	Bunch	Loughridge	Malpass	Pastor**	Perold	Raskin	Reid	Thomas	Volanakis
All Vanguard Funds	\$371,667	\$441,667	\$371,667	\$304,167	\$359,167	\$383,333	\$335,595	\$359,167	\$383,333

\*The amounts reported in this table reflect the total compensation paid to each trustee for his or her service as trustee of 210 Vanguard funds for the 12-month period ended October 31, 2024, and include any amount a trustee has elected to defer. During this period, the following trustees elected to defer all or a portion of their compensation as follows: Ms. Bunch, \$371,667; Mr. Perold, \$359,167; Ms. Raskin, \$191,667; Mr. Reid, \$335,595; and Dr. Thomas, \$179,583.

\*\*Mr. Pastor became a member of the funds' Boards effective January 1, 2024.

## Exhibit D - Audit and Non-Audit Fees

Trust	FYE	Audit Fees	Audit-Related Fees	Tax Fees	All Other Fees	Aggregate Non-Audit Fees*
Vanguard Admiral Funds	August 31, 2024	\$278,000	\$0	\$0	\$0	\$5,689,348
	August 31, 2023	261,000	0	0	0	4,999,862
Vanguard Bond Index Funds	December 31, 2023	419,000	0	0	0	5,189,838
	December 31, 2022	393,000	0	0	0	7,230,080
Vanguard California Tax-Free Funds	November 30, 2023	84,000	0	0	0	5,078,705
	November 30, 2022	88,000	0	0	0	7,880,080
Vanguard Charlotte Funds	October 31, 2024	238,000	0	0	0	3,702,548
	October 31, 2023	217,000	0	0	0	7,147,238
Vanguard Chester Funds	September 30, 2024	32,000	0	0	0	5,793,869
	September 30, 2023	30,000	0	0	0	4,999,862
Vanguard CMT Funds	August 31, 2024	58,000	10,000	0	0	5,689,348
	August 31, 2023	47,000	0	0	0	4,999,862
Vanguard Explorer Fund	October 31, 2024	42,000	0	0	0	3,702,548
	October 31, 2023	45,000	0	0	0	7,147,238
Vanguard Fenway Funds	September 30, 2024	64,000	0	0	0	5,793,869
	September 30, 2023	60,000	0	0	0	4,999,862
Vanguard Fixed Income Securities Funds	January 31, 2024	460,000	0	0	0	5,934,830
	January 31, 2023	424,000	0	0	0	6,708,813
Vanguard Horizon Funds	September 30, 2024	180,000	0	0	0	5,793,869
	September 30, 2023	170,000	0	0	0	4,999,862
Vanguard Index Funds	December 31, 2023	668,000	0	0	0	5,189,838
	December 31, 2022	632,000	0	0	0	7,230,080
Vanguard Institutional Index Funds	December 31, 2023	65,000	0	0	0	5,189,838
	December 31, 2022	61,000	0	0	0	7,230,080
Vanguard International Equity Index Funds	October 31, 2024	485,000	0	0	0	3,702,548
	October 31, 2023	313,000	0	0	0	7,147,238
Vanguard Malvern Funds	September 30, 2024	322,000	0	0	0	5,793,869
	September 30, 2023	305,000	0	0	0	4,999,862
Vanguard Massachusetts Tax-Exempt Funds	November 30, 2023	29,000	0	0	0	5,078,705
	November 30, 2022	30,000	0	0	0	7,880,080
Vanguard Money Market Reserves	August 31, 2024	64,000	0	0	0	5,689,348
	August 31, 2023	61,000	0	0	0	4,999,862
Vanguard Montgomery Funds	December 31, 2023	48,000	0	0	0	5,189,838
	December 31, 2022	47,000	0	0	0	7,230,080
Vanguard Municipal Bond Funds	October 31, 2024	231,000	0	0	0	3,702,548
	October 31, 2023	224,000	0	0	0	7,147,238

(continued)

Trust	FYE	Audit Fees	Audit-Related Fees	Tax Fees	All Other Fees	Aggregate Non-Audit Fees*
<b>Vanguard New Jersey Tax-Free Funds</b>	November 30, 2023	29,000	0	0	0	5,078,705
	November 30, 2022	31,000	0	0	0	7,880,080
<b>Vanguard New York Tax-Free Funds</b>	November 30, 2023	54,000	0	0	0	5,078,705
	November 30, 2022	56,000	0	0	0	7,880,080
<b>Vanguard Ohio Tax-Free Funds</b>	November 30, 2023	29,000	0	0	0	5,078,705
	November 30, 2022	30,000	0	0	0	7,880,080
<b>Vanguard Pennsylvania Tax-Free Funds</b>	November 30, 2023	30,000	0	0	0	5,078,705
	November 30, 2022	31,000	0	0	0	7,880,080
<b>Vanguard Quantitative Funds</b>	September 30, 2024	38,000	0	0	0	5,793,869
	September 30, 2023	36,000	0	0	0	4,999,862
<b>Vanguard Scottsdale Funds</b>	August 31, 2024	587,000	0	0	0	5,689,348
	August 31, 2023	558,000	0	0	0	4,999,862
<b>Vanguard Specialized Funds</b>	January 31, 2024	238,000	0	0	0	5,934,830
	January 31, 2023	218,000	0	0	0	6,708,813
<b>Vanguard STAR Funds</b>	October 31, 2024	183,000	0	0	0	3,702,548
	October 31, 2023	205,000	0	0	0	7,147,238
<b>Vanguard Tax-Managed Funds</b>	December 31, 2023	153,000	0	0	0	5,189,838
	December 31, 2022	144,000	0	0	0	7,230,080
<b>Vanguard Trustees' Equity Fund</b>	October 31, 2024	174,000	0	0	0	3,702,548
	October 31, 2023	135,000	0	0	0	7,147,238
<b>Vanguard Valley Forge Funds</b>	December 31, 2023	78,000	0	0	0	5,189,838
	December 31, 2022	102,000	0	0	0	7,230,080
<b>Vanguard Variable Insurance Funds</b>	December 31, 2023	547,000	0	0	0	5,189,838
	December 31, 2022	514,000	0	0	0	7,230,080
<b>Vanguard Wellesley Income Fund</b>	September 30, 2024	30,000	0	0	0	5,793,869
	September 30, 2023	28,000	0	0	0	4,999,862
<b>Vanguard Wellington Fund</b>	November 30, 2023	230,000	0	0	0	5,078,705
	November 30, 2022	250,000	0	0	0	7,880,080
<b>Vanguard Whitehall Funds</b>	October 31, 2024	483,000	0	0	0	3,702,548
	October 31, 2023	433,000	0	0	0	7,147,238
<b>Vanguard Windsor Funds</b>	October 31, 2024	92,000	0	0	0	3,702,548
	October 31, 2023	90,000	0	0	0	7,147,238
<b>Vanguard World Fund**</b>	August 31, 2024	779,000	0	0	0	5,689,348
	August 31, 2023	736,000	0	0	0	4,999,862

\*Aggregate non-audit fees include audit-related fees, tax fees, and all other fees to the trusts, Vanguard, and any entity controlling, controlled by, or under common control of Vanguard.

\*\*The fiscal year-end of Vanguard Mega Cap Growth Index Fund, a series of this trust, is 9/30.

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