

Prepared for

Nebraska Investment Council

**Review of Vanguard Index Management and
Investment Stewardship**

February 9, 2023

What sets Vanguard Index Funds apart?



Consistently adding value while maintaining tight tracking.

Source: Vanguard, as of December 2021.

* Vanguard is investor-owned. As an investor owner, you own the funds that own Vanguard.

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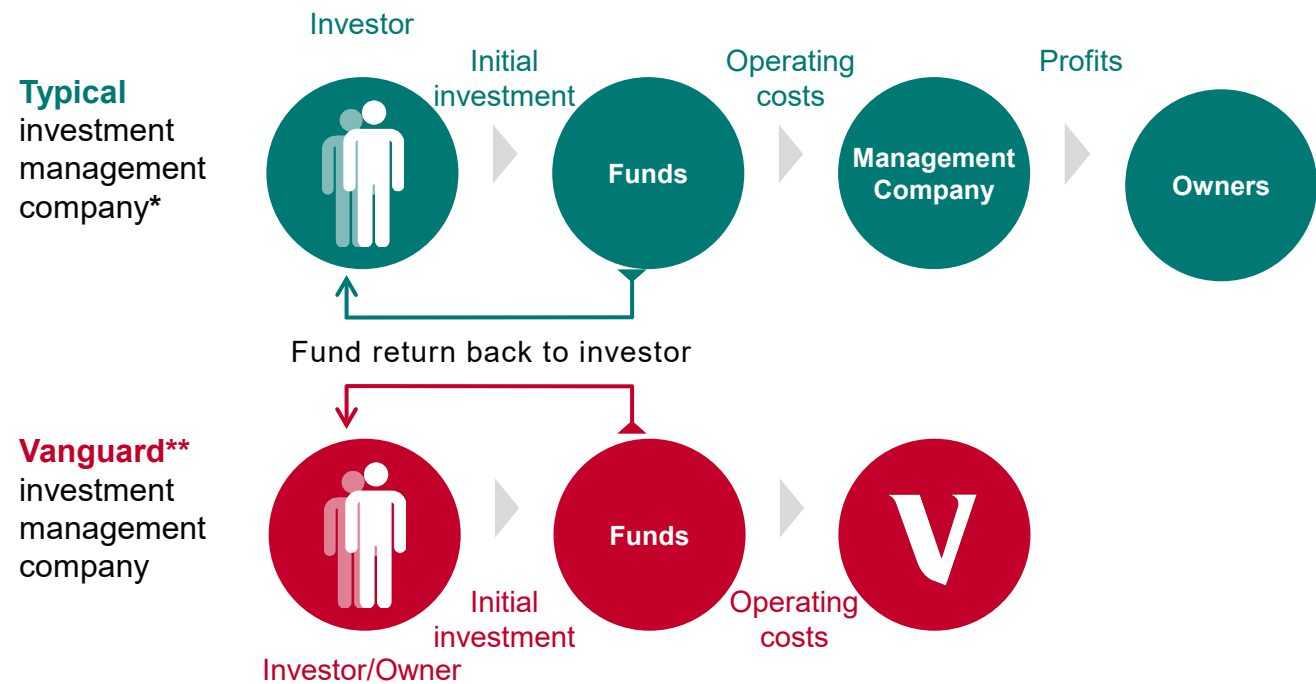
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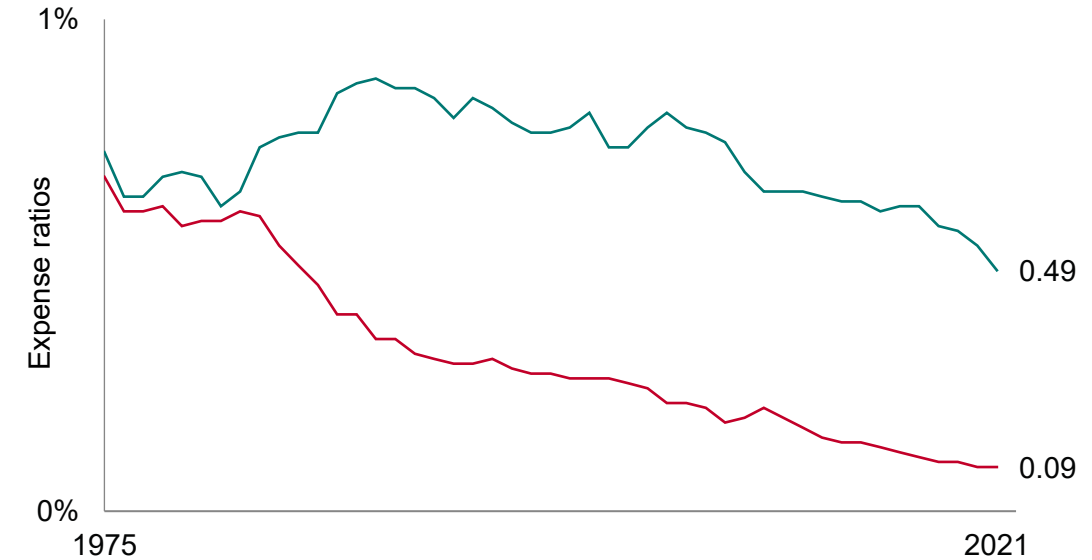
Vanguard is different—and here's how our clients benefit

Investors can benefit from an asset manager aligned with their interests. At Vanguard, this focus is at the core of everything we do.

Corporate ownership structure



Vanguard has a history of lowering the cost of investing



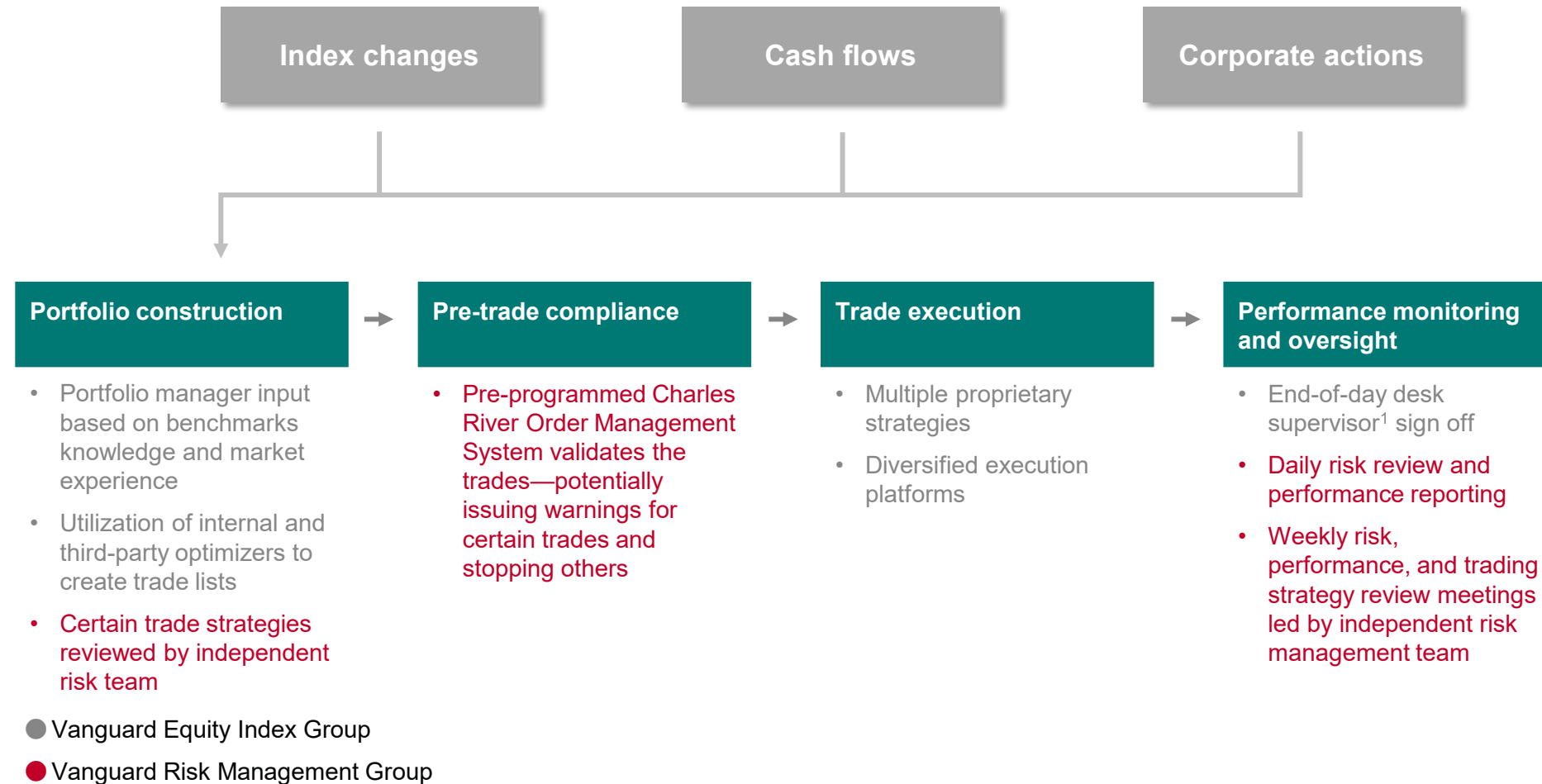
— Morningstar industry asset-weighted average (ex-Vanguard)
 — Vanguard asset-weighted-average

* Owned by outside third partie(s). ** Owned by funds, which are owned by fund shareholders.

The typical fund management company is owned by third parties, either public or private stockholders, not by the funds it serves. The fund management companies have to charge fund investors fees that are high enough to generate profits for the companies' owners. In contrast, the Vanguard funds own the management company known as Vanguard—a unique arrangement that eliminates conflicting loyalties. No wonder Vanguard's average fund expense ratio in 2021 was 0.09%, less than one-fifth that of the 0.49% industry average. That means Vanguard fund investors keep more of any return their funds earn. All averages are asset-weighted. Industry averages exclude Vanguard.

Sources: Vanguard; Morningstar, as of December 31, 2021.

Vanguard's equity indexing process



Source: Vanguard.

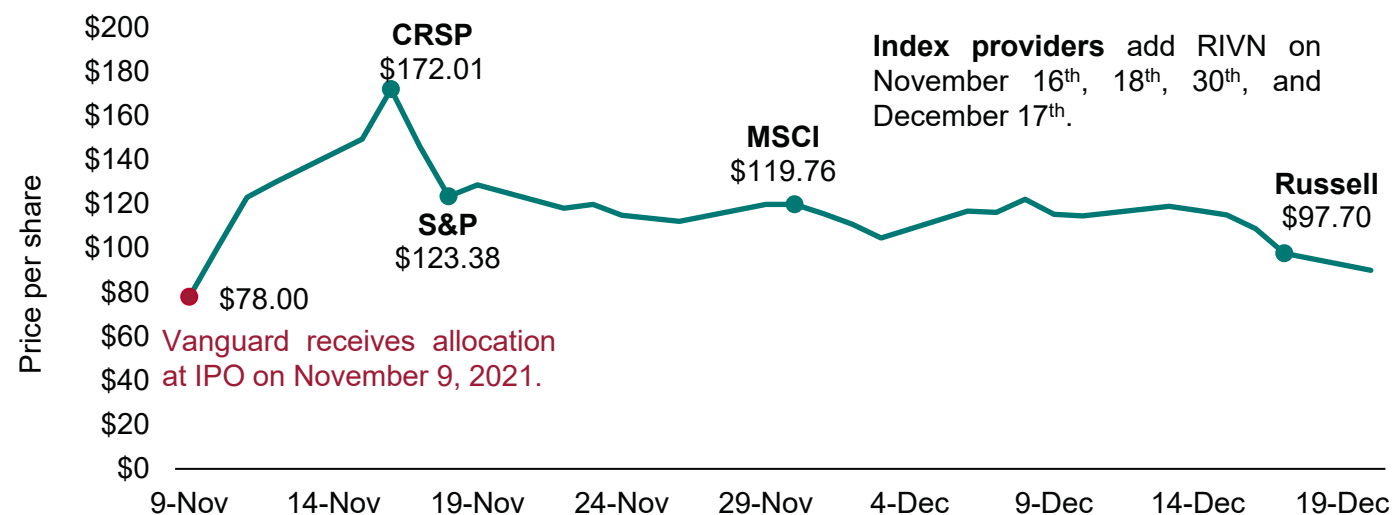
1 Responsibility rotated weekly amongst senior portfolio managers.

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Corporate action management case study

Implementing an effective IPO strategy to add value

Rivian price history



Value-add by Index Provider

Index Provider	Shares Bought	Price	Index Add Price	Profit vs. Benchmark
CRSP	331,198	\$78.00	\$172.01	\$31.1M
Russell	9,632	\$78.00	\$97.70	\$0.2
S&P	144,934	\$78.00	\$123.38	\$6.6
MSCI	14,236	\$78.00	\$119.76	\$0.6
TOTAL	500,000	--	--	\$38.5M

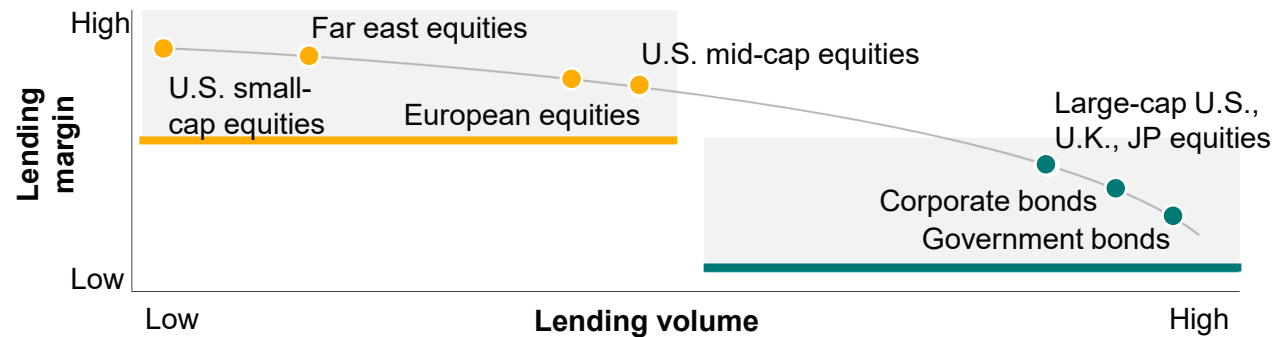
Value-add by fund:

Vanguard index fund	Value-add	Value-add (bp)
Consumer Discretionary	\$0.6	0.008%
Extended Market	\$6.7	0.006%
Total Stock	\$25.2	0.002%

- Rivian (RIVN) listed through an initial public offering (IPO) on November 9, 2021.
- Based on our analysis of the index weight and risk budget, Vanguard decided to participate in this IPO.
- Vanguard's prominence with brokers allowed us to receive an allocation at \$78 per share.
- On November 16, 2021, CRSP added this stock to its US equity indexes at \$172.01 per share, followed by S&P on November 18 at \$123.38 per share. MSCI added RIVN on November 30 at \$119.76 and Russell added the stock to its indexes on December 17 at \$97.70. Vanguard's allocation generated a gain to the funds of more than \$38 million, in addition to commission savings and avoiding market impact.

Securities lending strategies

Securities lending is a well-established investment strategy that offers an additional source of revenue for trust and fund investors. Loans, secured by collateral, are made to borrowers in order to generate incremental returns.

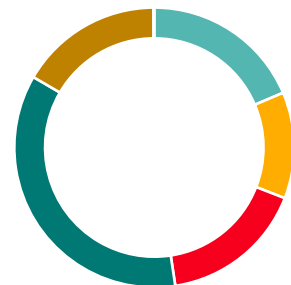


Sources: Brown Brothers Harriman (BBH) and Vanguard.

Asset-weighted cost (2021)	4.9%
Revenue returned to funds (2021)	95.1%
Range of acceptable loans by regulations	up to 33% of gross assets
– Best practice range by Vanguard	0% to 7% of gross assets
Weighted-average percentage of portfolios on loan	0.5% of gross assets

Vanguard Market Liquidity Fund is used for collateral management (102% for U.S. equities and 105% for non-U.S. equities).

Sector allocation



Market Liquidity Fund sector allocation and key characteristics

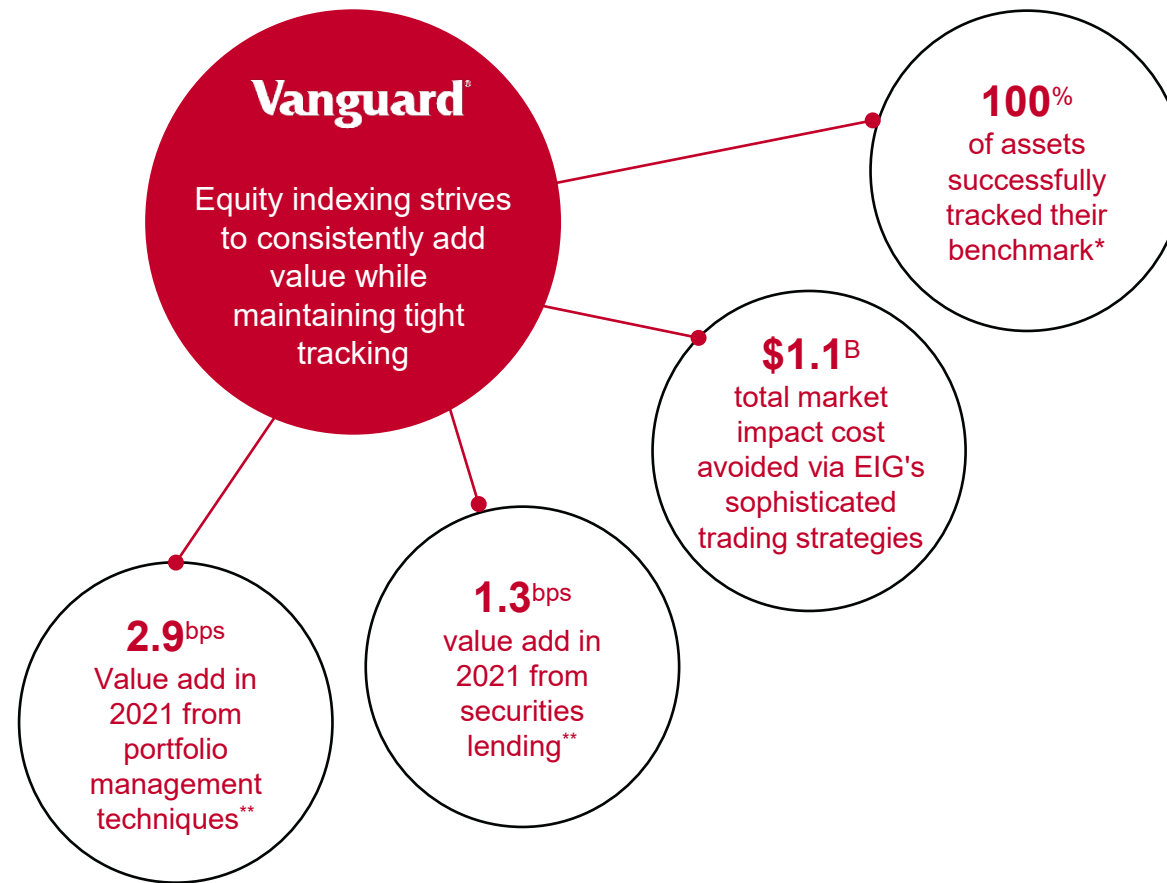
● Treasuries	18.6%
● Agencies	12.3%
● Certificates of deposit	16.7%
● Repurchase agreements	35.8%
● Commercial paper	16.5%
● Municipals	0.1%

Average maturity	14 days
Expense ratio	0.5 bps
SEC yield	2.84%
Number of holdings	135

Source: Vanguard. All data as of September 30, 2022, unless otherwise noted.

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Trust built on a track record of performance: Vanguard Equity Indexing



Sources: Morningstar and Vanguard, as of December 31, 2021.

* Tracking error tolerance set for each fund by Vanguard's independent Risk Management Group; figured inclusive of publicly available funds.

** Vanguard asset-weighted excess return across U.S.-domiciled index portfolios managed by Equity Index Group. A fund's expense ratio should not be reviewed in isolation but alongside multiple other factors, including portfolio management and securities lending, which in aggregate drive a fund's net return to its investors.

Vanguard's Investment Stewardship program

On behalf of Vanguard's internally managed equity funds, the Investment Stewardship program works to drive long-term value creation for investors in our funds¹. We represent our fund shareholders' interests in three key ways:

Corporate governance practices associated with shareholder value

We seek to identify, and encourage the adoption of, corporate governance practices and principles that are associated with sustainable, long-term value creation for shareholders.

Long-term engagement with portfolio companies

We conduct ongoing dialogues with portfolio company directors and executives to understand companies' governance practices and their boards' oversight of long-term strategy.

Proxy voting

We cast proxy votes at companies' shareholder meetings on behalf of our internally managed equity funds.

What we don't do

Vanguard's Investment Stewardship team does not seek to dictate company strategy or operations. The team also does not nominate director candidates or put forth shareholder proposals. We do not advance any agenda beyond long-term shareholder value creation at each individual portfolio company.

¹ Vanguard's Investment Stewardship team administers proxy voting and portfolio company engagement activities on behalf of Vanguard's internally managed equity funds. Vanguard's externally managed funds are managed by third-party investment advisors. Proxy voting and engagement activities for Vanguard's externally managed funds are conducted by each fund's respective advisor.

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Vanguard's Investment Stewardship principles

Vanguard's approach to Investment Stewardship is grounded in four principles of good corporate governance that are associated with long-term shareholder value:

Board composition and effectiveness

Good governance begins with a great board of directors. Our primary focus is to ensure that a company's board reflects the diversity of thought and perspectives required to effectively represent the interests of all shareholders and provide independent oversight of company management, strategy, and any risks to shareholder value. We look for board members who are independent, committed, capable, and appropriately experienced.

Oversight of strategy and risk

Boards are responsible for effective oversight of a company's long-term strategy and any material risks – as well as disclosure of such risks.

Executive compensation

Performance-linked compensation policies and practices are fundamental drivers of sustainable, long-term value.

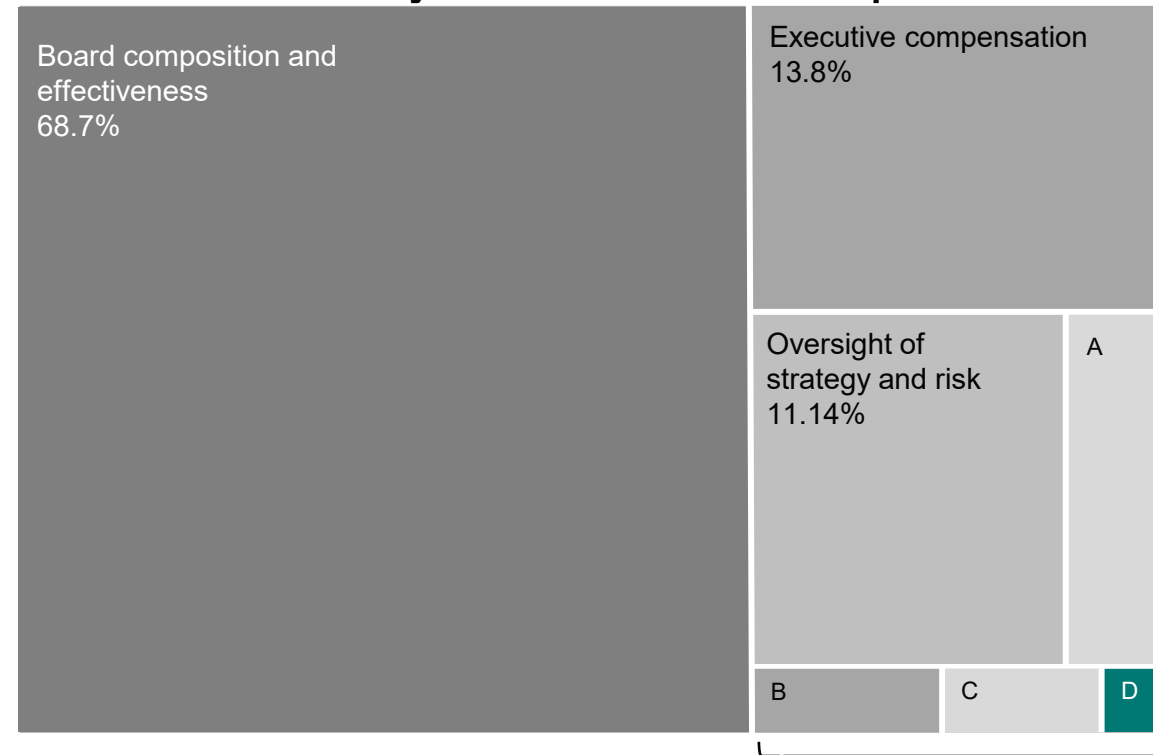
Shareholder rights

Companies should have in place governance structures to ensure that boards and management serve the best interests of the shareholders they represent.

Vanguard's approach to proxy voting

- Each of Vanguard's internally managed funds has proxy voting authority over the stocks that it owns, and the board of trustees of each fund has tasked Vanguard's Investment Stewardship team with administering proxy voting on behalf of the fund. Each fund's board has adopted proxy voting policies and guidelines that are administered by the Investment Stewardship team. The policies are clearly disclosed on our website.¹
- With respect to shareholder proposals, we make balanced, case-by-case judgments, carefully weighing each proposal on its merits with respect to questions of shareholder value and the facts and circumstances at the company in question.
- Vanguard supports clear, comparable disclosure of material financial risks by companies so that the market has the information required to reflect such risks appropriately in company share prices.

Breakdown of Proxy Ballot Items at U.S. Companies in 2021



Sources: Vanguard 2021 Investment Stewardship Annual Report, as of April 05, 2021.

*Breakdown of proxy ballot items at U.S. companies in 2021

- A. Other proposals 3.72%
- B. Shareholder rights 1.24%
- C. Governance-related shareholder proposals .99%
- D. Environmental and social proposals .46%**

¹ Our four corporate governance principles serve as the foundation of our program, guiding our proxy voting and engagement activities. We apply the principles to our voting practices, considering the regional and market-specific voting policies that the funds have adopted. To learn more about how we apply the principles, view our regional voting policies here: <https://corporate.vanguard.com/content/corporatesite/us/en/corp/how-we-advocate/investment-stewardship/reports-and-policies.html>

Presenter biographies and disclaimers

Today's presenters



Andrey Kotlyarenko, CFA is a product manager on the Equity Index Team in Vanguard's Portfolio Review Department (PRD). In this role he is responsible for conducting competitor analysis, creating positioning for Vanguard's indexing capabilities, meeting with clients and prospects, publishing on noteworthy developments, and supporting index education initiatives. Mr. Kotlyarenko joined Vanguard in 2005. Prior to joining PRD, he worked within Vanguard's Investment Management Group where he was responsible for investment risk management and oversight for Vanguard's equity products.

Mr. Kotlyarenko earned a B.S. in Finance from Drexel University and holds a M.S. in Finance from Penn State University. He is a CFA® charter holder and a member of the CFA Society of Philadelphia.



John Galloway leads Vanguard's global Investment Stewardship program. Investment Stewardship operates at the intersection of corporate governance, environmental risk, and social risk, working to promote and safeguard long-term shareholder value in boardrooms around the world. The program applies oversight to the Vanguard funds' portfolio companies through engagement, advocacy for good governance practices, and proxy voting. John joined Vanguard in 2017.

Before joining Vanguard, John's background spans the private and public sectors. He has extensive experience in corporate governance, change management, and regulatory and legislative policy. He served in senior roles within the Obama White House, including as a Special Assistant to the President as part of the National Economic Council. Prior to his work in government, John served as President of Atlantic Media and held senior executive positions with the Advisory Board Company.



Kelly M. Sweppenhiser, CFA, CAIA, is a Director of Consultant Relations in Vanguard Institutional Investor Group. Prior to his current role, he has served clients within Vanguard's Institutional, Financial Advisor, and Personal Investor divisions since joining Vanguard in 2007. Previously, Mr. Sweppenhiser was head of Pension and Insurance General Account Solutions where he was responsible for leading a team of professionals who partnered with institutional asset-owners and their consultants to achieve portfolio objectives.

Mr. Sweppenhiser earned a B.A. in economics and business from Virginia Military Institute and an M.S. in financial services from Saint Joseph's University. He serves on the executive committee of the Virginia Military Institute athletic foundation board of directors, is a Chartered Financial Analyst® charterholder, and a Chartered Alternative Investment Analyst charterholder.

Important information

For more information about any fund, visit institutional.vanguard.com or call 866-499-8473 to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information are contained in the prospectus; read and consider it carefully before investing.

Vanguard ETF® Shares are not redeemable with the issuing fund other than in very large aggregations worth millions of dollars. Instead, investors must buy or sell Vanguard ETF Shares in the secondary market and hold those shares in a brokerage account. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling.

Mutual funds and all investments are subject to risk, including the possible loss of the money you invest. Prices of mid- and small-cap stocks often fluctuate more than those of large-company stocks. Investments in stocks or bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk. These risks are especially high in emerging markets. Funds that concentrate on a relatively narrow sector face the risk of higher share-price volatility. It is possible that tax-managed funds will not meet their objective of being tax-efficient. Because company stock funds concentrate on a single stock, they are considered riskier than diversified stock funds.

Investments in bond funds are subject to the risk that an issuer will fail to make payments on time and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments. High-yield bonds generally have medium- and lower-range credit quality ratings and are therefore subject to a higher level of credit risk than bonds with higher credit quality ratings. Although the income from a municipal bond fund is exempt from federal tax, you may owe taxes on any capital gains realized through the fund's trading or through your own redemption of shares. For some investors, a portion of the fund's income may be subject to state and local taxes, as well as to the federal Alternative Minimum Tax. Diversification does not ensure a profit or protect against a loss. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income.

While U.S. Treasury or government agency securities provide substantial protection against credit risk, they do not protect investors against price changes due to changing interest rates. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest.

Investments in Target Retirement Funds and Trusts are subject to the risks of their underlying funds. The year in the fund or trust name refers to the approximate year (the target date) when an investor in the fund or trust would retire and leave the workforce. The fund/trust will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. The Income Trust/Fund and Income and Growth Trust have fixed investment allocations and are designed for investors who are already retired. An investment in a Target Retirement Fund or Trust is not guaranteed at any time, including on or after the target date.

Vanguard is responsible only for selecting the underlying funds and periodically rebalancing the holdings of target-date investments. The asset allocations Vanguard has selected for the Target Retirement Funds are based on our investment experience and are geared to the average investor. Investors should regularly check the asset mix of the option they choose to ensure it is appropriate for their current situation.

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Vanguard Marketing Corporation, Distributor of the Vanguard Funds. U.S. Patent Nos. 6,879,964.

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