

Vanguard Index Funds

Quarterly Review | December 31, 2024



Contents



Quarterly spotlight

Executive summary **3**



Fixed income market and fund performance

Fixed income markets overview **5**

Performance and attribution for Vanguard taxable fixed income index funds **8**



Equity market and fund performance

Equity markets overview **16**

Performance and attribution for Vanguard equity index funds **18**



Securities lending

Vanguard securities-lending program overview **33**

Vanguard securities lending by fund **34**



Benchmark methodologies

Fixed income **39**

Equity **40**



Executive summary

Strong gains for risk assets in 2024

2024 was another favorable year for riskier assets. Led by U.S. large-cap technology stocks, the global stock market ended the year with double-digit returns. The global bond market, however, experienced mixed performance throughout the year. After the U.S. Federal Reserve started the long-awaited rate-cutting cycle during the third quarter of 2024, it scaled back on the number of anticipated interest rate cuts for 2025, which led to a negative fourth quarter for U.S. bonds. Despite this, domestic bonds were able to maintain slight gains at the end of 2024, while international bonds were negative.

During the fourth quarter, the consumer discretionary, communication services, and financials sectors were top performers within U.S. equities. Conversely, the materials, health care and real estate sectors were the worst performing. Large-cap stocks outpaced both small- and mid-cap stocks, a reversal from third-quarter performance. International equities ended the year with negative returns, with emerging markets underperforming developed markets. Japan, however, was a bright spot for the sector in the fourth quarter, as investors remained optimistic about its economy.

The global fixed income market saw a reversal from the third quarter, experiencing a rocky finish to 2024. Domestic fixed income performed better than unhedged international fixed income. In line with other risk assets, high-yield bonds performed strongly, as they were the top fixed income sector for all four quarters of 2024. Outside the U.S., European bonds posted positive returns as economic momentum weakened, potentially signaling the need for rate cuts.

Despite market volatility, Vanguard, has striven to consistently add value over its 40-plus-year history of managing index portfolios by proactively reducing costs and applying conservative securities-lending and collateral reinvestment practices. Vanguard's investment principles are rooted in setting clear goals, maintaining balance, minimizing costs, and staying disciplined with a long-term perspective.

Performance of key Vanguard index funds

Fund name (inception date)	1Q 2024	2Q 2024	3Q 2024	4Q 2024	1-year
Vanguard Total Stock Market Index Fund (07/07/1997)	10.00%	3.25%	6.17%	2.63%	23.75%
Vanguard Total International Stock Index Fund (11/29/2010)	4.32%	0.80%	8.03%	-7.40%	5.18%
Vanguard Total Bond Market Index Fund (09/18/1995)	-0.79%	0.18%	5.07%	-3.04%	1.25%
Vanguard Total International Bond Index Fund (05/31/2013)	0.10%	-0.58%	4.12%	0.09%	3.71%
Vanguard Short-Term Inflation-Protected Securities Index Fund (10/17/2012)	0.85%	1.43%	2.50%	-0.10%	4.75%

Source of performance figures: Vanguard, Institutional share class, as of December 31, 2024.

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so, investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at institutional.vanguard.com. Standard performance of the funds can be located on pages 8 and 23–25 of the Quarterly Review.



Fixed income market and fund performance

IN THIS SECTION:

Fixed income markets overview

Performance and attribution for Vanguard
taxable fixed income index funds



Fixed income markets overview

Figure 5.1 Treasury yields (%)

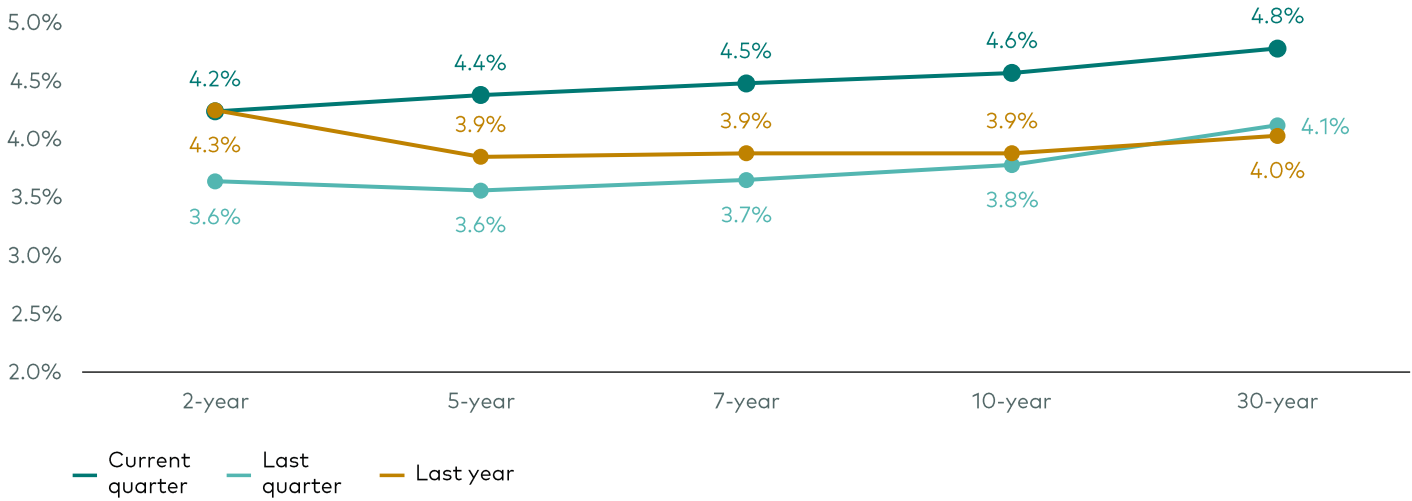
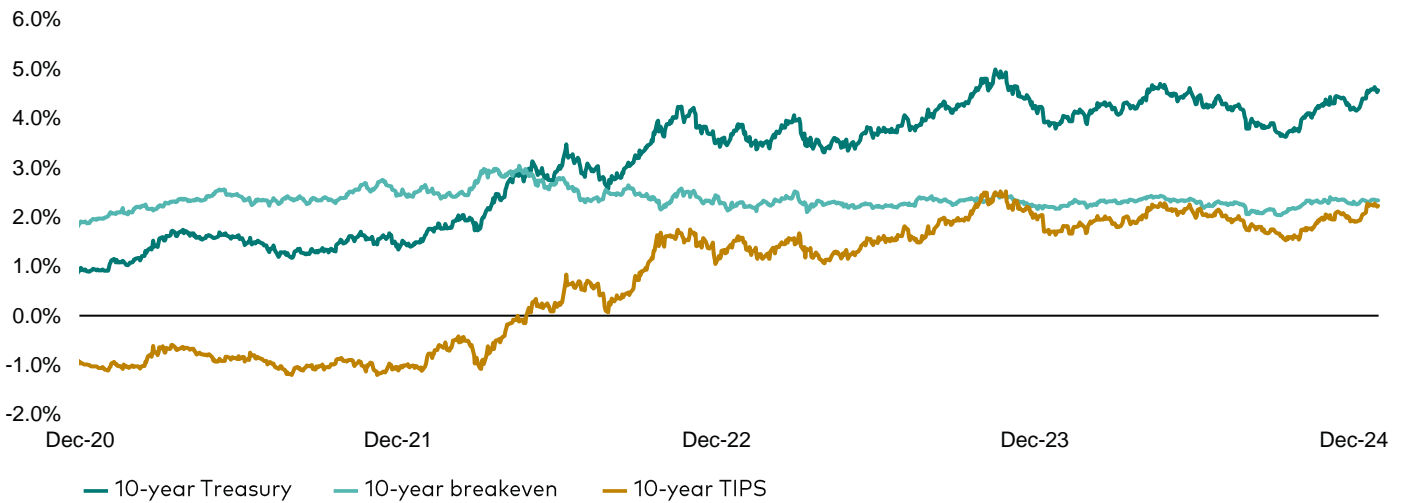


Figure 5.2 Inflation expectations*



Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

* The break-even inflation rate represents a measure of expected inflation derived from the difference between the nominal yield on the 10-year Treasury—which includes inflation expectations—and the yield of the 10-year Treasury Inflation-Protected Security (TIPS)—which does not include inflation expectations. This delta implies what the market believes will be the average rate of inflation over the next 10 years.



Fixed income markets overview

Figure 6.1 Credit spreads (1-year)

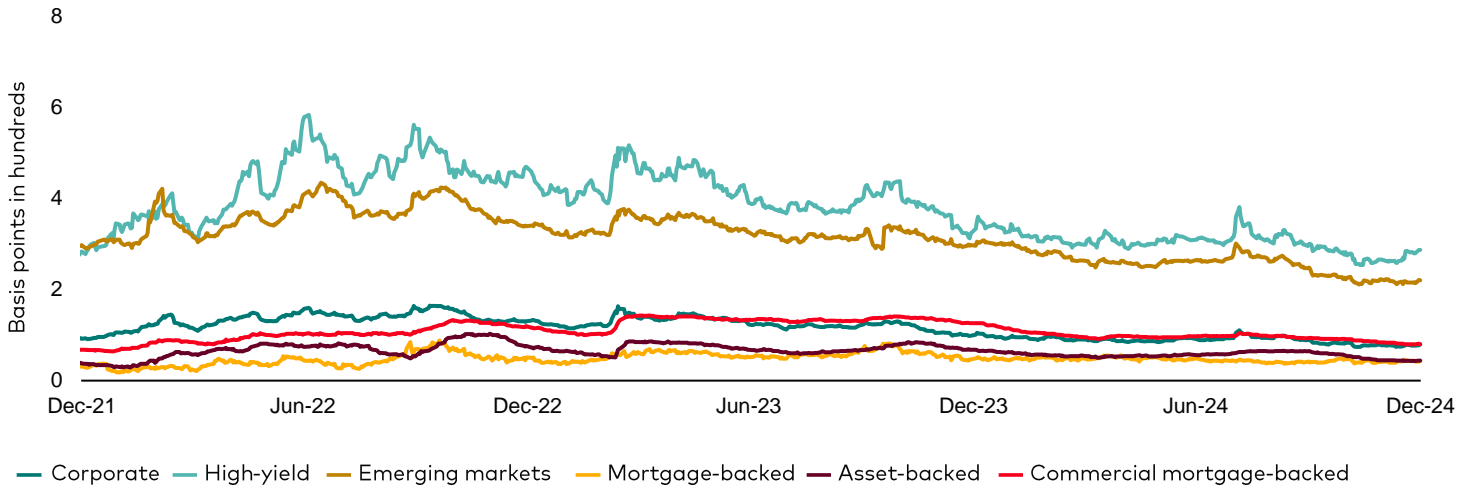
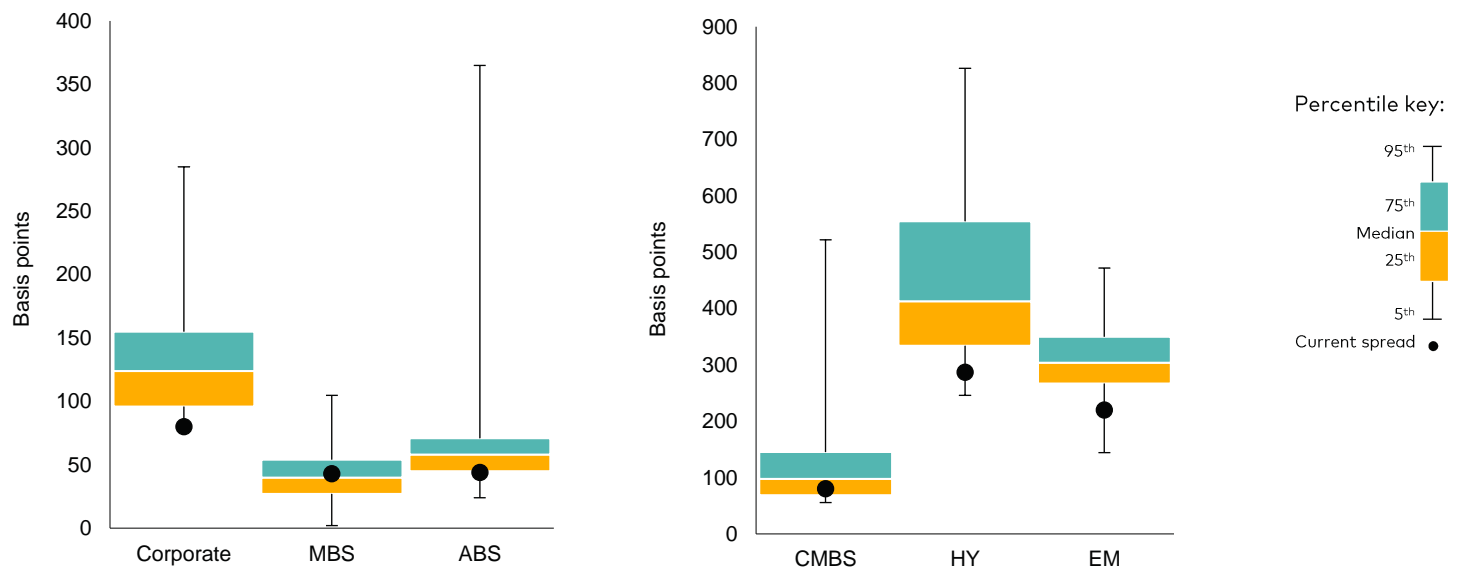


Figure 6.2 Credit spreads relative to comparable Treasuries over 20 years



Sources: Vanguard and Bloomberg. All data as of December 31, 2024, unless otherwise noted.

Note: Sectors represented by data from Bloomberg indexes: Bloomberg US Agg Corporate, Bloomberg US Corporate High Yield, Bloomberg EM USD Agg, Bloomberg US MBS Fixed Rate, Bloomberg US Agg ABS, and Bloomberg US Agg CMBS.



Fixed income markets overview

Figure 7.1 U.S. total return by sector

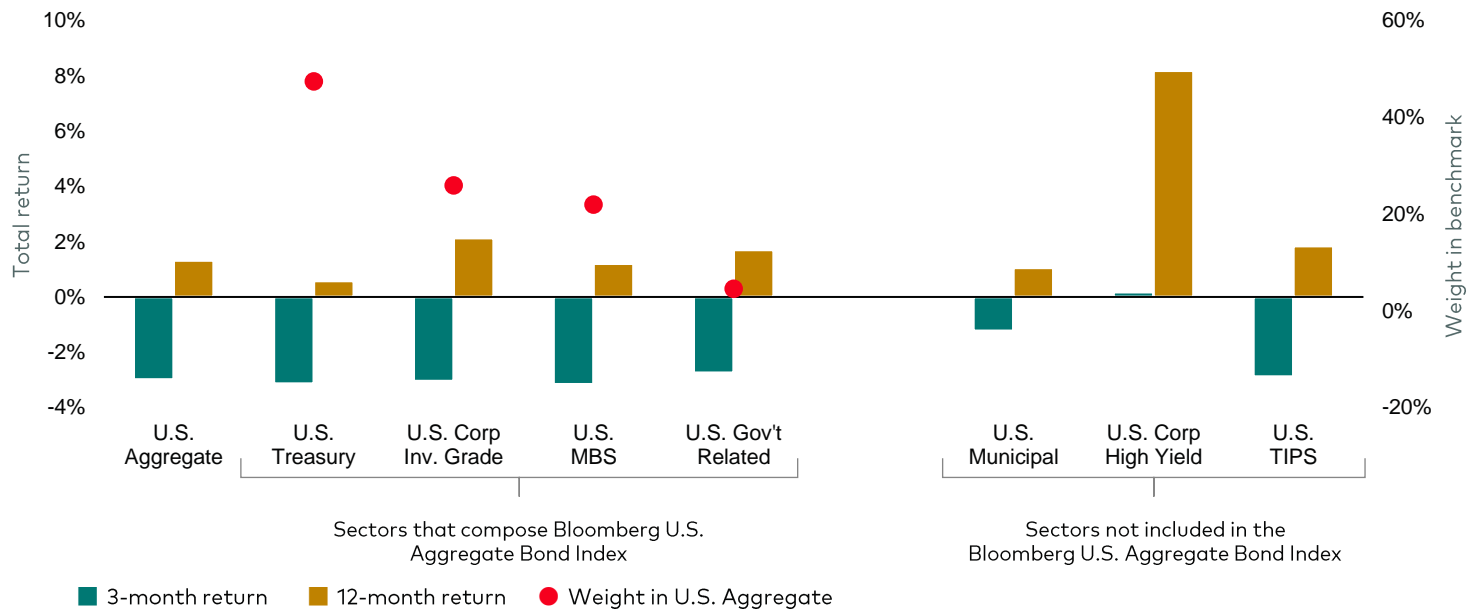
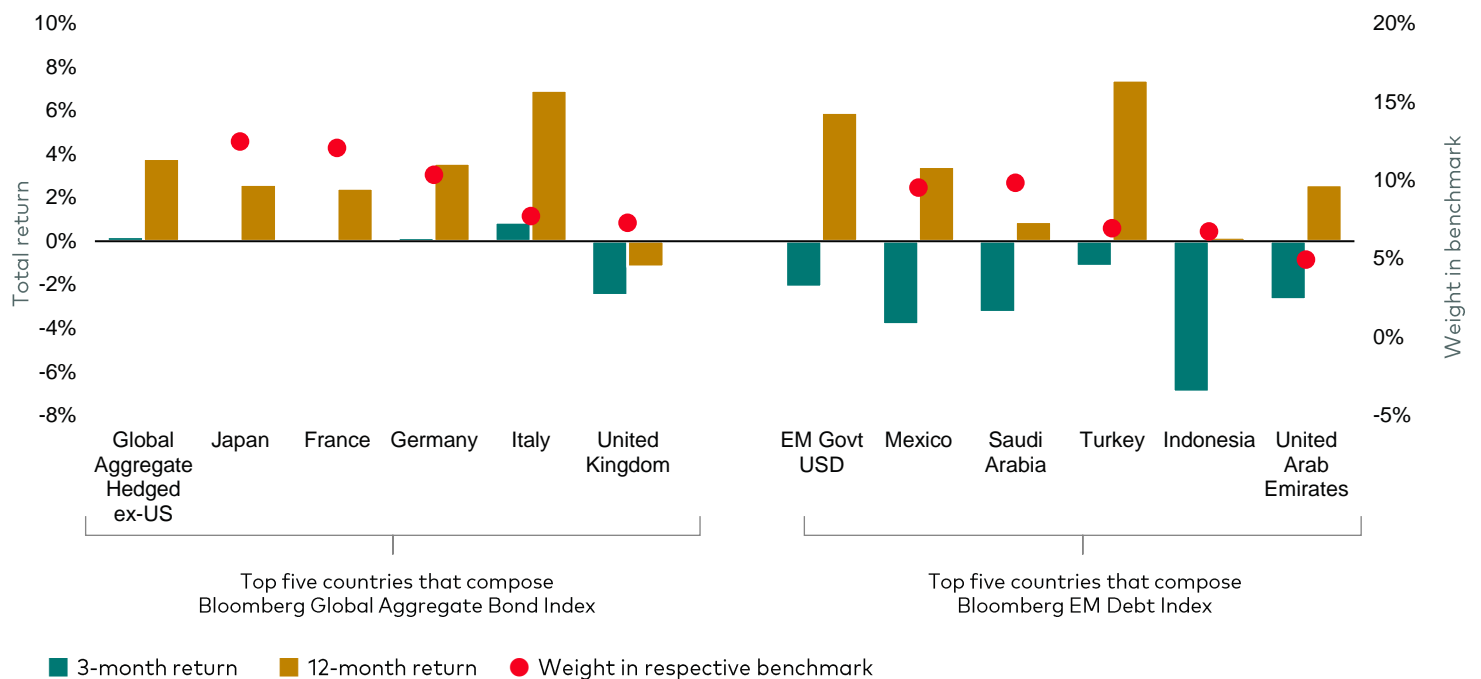


Figure 7.2 Developed and emerging markets total return by country



Sources: Vanguard and Bloomberg. All data as of December 31, 2024, unless otherwise noted.

Past performance is not a guarantee of future results. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.



Performance for all Vanguard taxable fixed income index funds

	Expense ratio	3 months	1 year	3 years	5 years	10 years	Since inception	Inception date
Broad-market								
Vanguard Total Bond Market Index Fund (VBTIX)	0.035	-3.04	1.25	-2.40	-0.30	1.34	4.17	9/18/1995
Vanguard Total Bond Market II Index Fund (VTBNX)	0.020	-3.07	1.31	-2.39	-0.36	1.30	2.53	2/17/2009
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	0.050	-3.00	1.42	-1.98	-0.72	0.86	1.19	10/31/2013
Vanguard Total Corporate Bond ETF (VTC)	0.040							
Market price		-3.06	2.16	-2.21	0.16	—	1.75	11/7/2017
NAV		-3.09	2.13	-2.21	0.16	—	1.74	11/7/2017
Short-term								
Vanguard Short-Term Bond Index Fund (VBITX)	0.050	-0.75	3.75	0.93	1.27	1.62	1.52	9/27/2011
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	0.040	-0.10	4.75	2.13	3.33	2.54	1.90	10/17/2012
Vanguard Short-Term Treasury Index Fund (VSBIX)	0.050	-0.09	4.01	1.40	1.33	1.33	1.12	8/23/2010
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	0.050	-0.40	4.97	1.67	1.92	2.36	2.73	11/19/2009
Intermediate-term								
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	0.050	-3.40	1.53	-2.24	0.04	1.78	3.79	1/26/2006
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	0.050	-2.84	1.27	-1.87	-0.18	1.10	2.00	3/19/2010
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	0.050	-2.71	3.29	-1.13	0.85	2.74	4.12	11/19/2009
<i>Fund Purchase Transaction Fee: 0.25</i>								
Long-term								
Vanguard Long-Term Bond Index Fund (VBLLX)	0.050	-7.49	-4.13	-9.12	-3.21	0.99	4.18	2/2/2006
<i>Fund Purchase Transaction Fee: 0.50</i>								
Vanguard Long-Term Treasury Index Fund (VLGIX)	0.050	-8.66	-6.46	-11.88	-5.22	-0.67	1.94	7/30/2010
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	0.050	-6.26	-1.87	-6.80	-1.87	2.16	4.55	11/19/2009
<i>Fund Purchase Transaction Fee: 1.00</i>								
Vanguard Extended Duration Treasury Index Fund (VEDTX)	0.060	-13.19	-13.31	-18.74	-9.03	-2.34	2.67	11/28/2007
<i>Fund Purchase Transaction Fee: 0.50</i>								
International/Global								
Vanguard Total International Bond Index Fund (VTIFX)	0.070	0.09	3.71	-0.55	0.12	1.94	2.42	5/31/2013
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	0.180	-2.16	5.73	-0.90	0.21	—	3.10	2/11/2015
<i>Fund Purchase Transaction Fee: 0.75</i>								
Vanguard Total World Bond ETF (BNDW)	0.050							
Market price		-1.57	2.44	-1.48	-0.11	—	1.41	9/4/2018
NAV		-1.52	2.44	-1.48	-0.10	—	1.41	9/4/2018

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

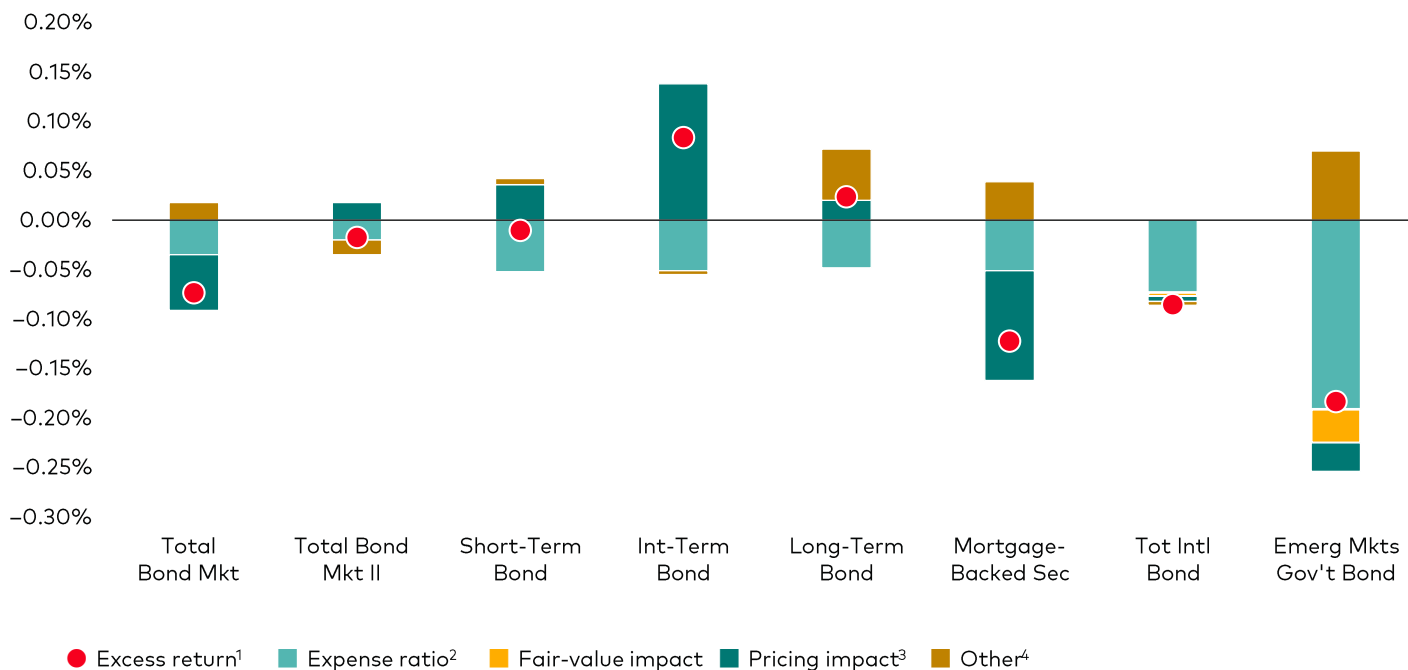
Performance data for periods of less than one year does not reflect the deduction of purchase and redemption fees that may apply. All other performance data are adjusted for purchase and redemption fees, where applicable. If these fees were included, the performance would be lower. The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited.

For performance data current to the most recent month-end, visit our website at institutional.vanguard.com/performance



Attribution for all Vanguard taxable fixed income index funds

Figure 9.1 Year-to-date excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Total Bond Market Index Fund (VBTIX)	1.326	-0.035	0.000	-0.056	0.018	1.252	-0.073
Vanguard Total Bond Market II Index Fund (VTBNX)	1.326	-0.020	0.000	0.018	-0.015	1.309	-0.017
Vanguard Short-Term Bond Index Fund (VBITX)	3.756	-0.052	0.000	0.036	0.006	3.746	-0.010
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	1.449	-0.051	0.000	0.138	-0.004	1.533	0.084
Vanguard Long-Term Bond Index Fund (VBLLX)	-4.152	-0.048	0.000	0.020	0.052	-4.128	0.024
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	1.543	-0.051	0.000	-0.111	0.039	1.421	-0.122
Vanguard Total International Bond Index Fund (VTIFX)	3.794	-0.073	-0.004	-0.005	-0.004	3.708	-0.085
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	5.914	-0.191	-0.034	-0.029	0.070	5.731	-0.183

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Pricing impact includes differences in external pricing vendor inputs.

³ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

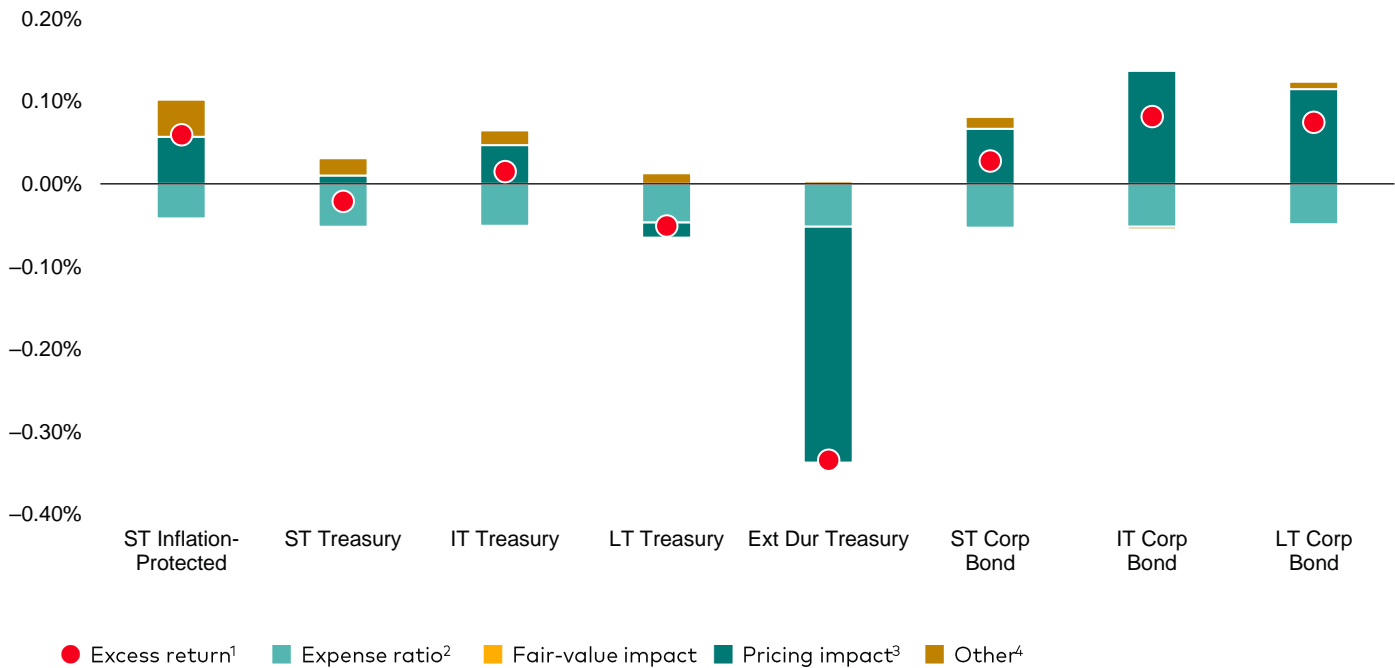
⁴ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for all Vanguard taxable fixed income index funds

Figure 10.1 Year-to-date excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	4.693	-0.042	0.000	0.057	0.045	4.753	0.060
Vanguard Short-Term Treasury Index Fund (VSBIX)	4.027	-0.052	0.000	0.010	0.021	4.007	-0.021
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	1.257	-0.051	0.000	0.047	0.018	1.272	0.015
Vanguard Long-Term Treasury Index Fund (VLGIX)	-6.411	-0.047	0.000	-0.018	0.013	-6.463	-0.051
Vanguard Extended Duration Treasury Index Fund (VEDTX)	-12.974	-0.052	0.000	-0.286	0.003	-13.310	-0.335
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	4.945	-0.053	0.000	0.067	0.014	4.973	0.028
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	3.212	-0.052	0.000	0.137	-0.003	3.294	0.082
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	-1.945	-0.049	0.000	0.115	0.009	-1.870	0.075

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

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² Pricing impact includes differences in external pricing vendor inputs.

³ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

⁴ Excess return equals fund return minus benchmark return.

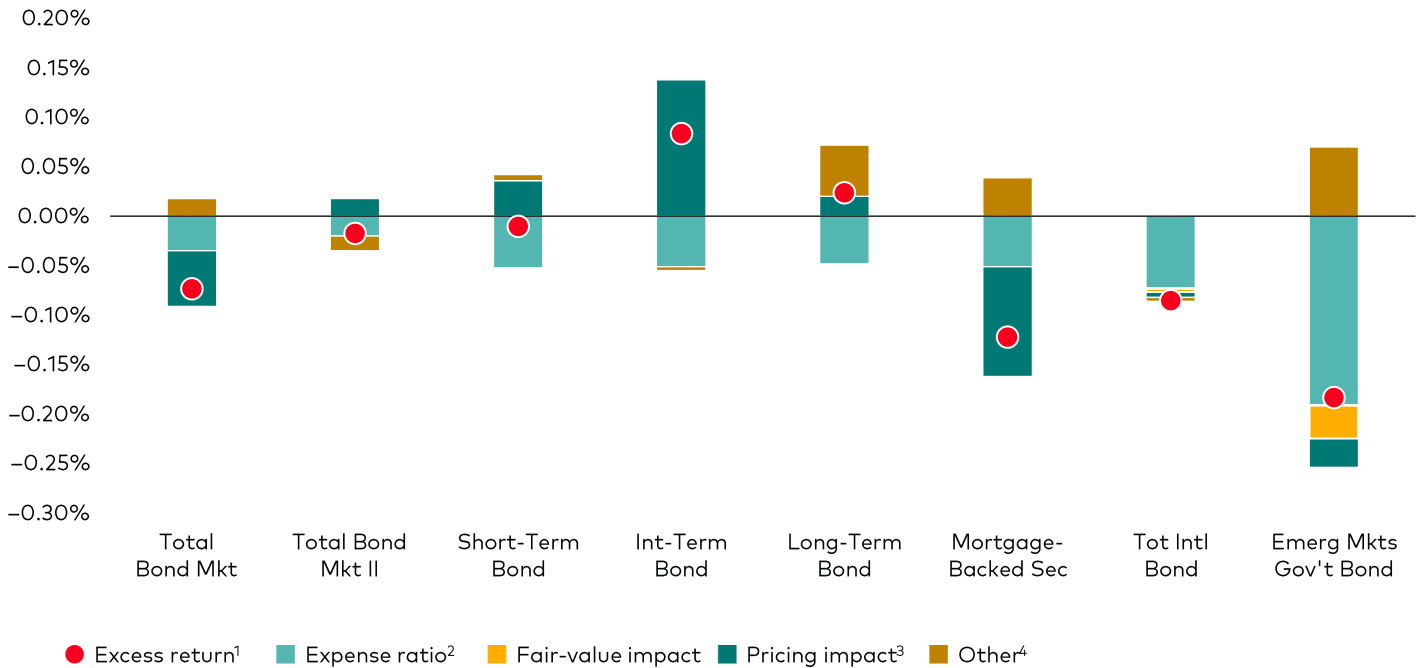
Past performance is no guarantee of future returns.





Attribution for all Vanguard taxable fixed income index funds

Figure 11.1 One-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Total Bond Market Index Fund (VBTIX)	1.326	-0.035	0.000	-0.056	0.018	1.252	-0.073
Vanguard Total Bond Market II Index Fund (VTBNX)	1.326	-0.020	0.000	0.018	-0.015	1.309	-0.017
Vanguard Short-Term Bond Index Fund (VBITX)	3.756	-0.052	0.000	0.036	0.006	3.746	-0.010
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	1.449	-0.051	0.000	0.138	-0.004	1.533	0.084
Vanguard Long-Term Bond Index Fund (VBLLX)	-4.152	-0.048	0.000	0.020	0.052	-4.128	0.024
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	1.543	-0.051	0.000	-0.111	0.039	1.421	-0.122
Vanguard Total International Bond Index Fund (VTIFX)	3.794	-0.073	-0.004	-0.005	-0.004	3.708	-0.085
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	5.914	-0.191	-0.034	-0.029	0.070	5.731	-0.183

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Pricing impact includes differences in external pricing vendor inputs.

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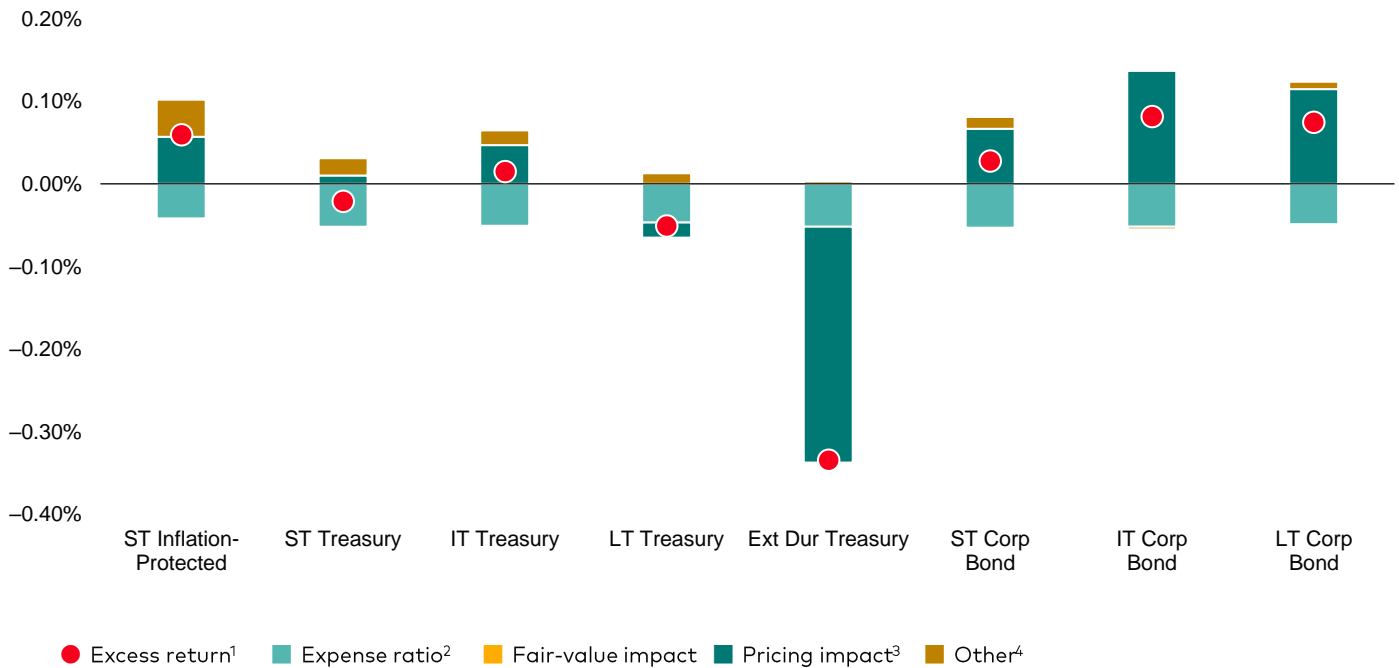
⁴ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for all Vanguard taxable fixed income index funds

Figure 12.1 One-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	4.693	-0.042	0.000	0.057	0.045	4.753	0.060
Vanguard Short-Term Treasury Index Fund (VSBIX)	4.027	-0.052	0.000	0.010	0.021	4.007	-0.021
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	1.257	-0.051	0.000	0.047	0.018	1.272	0.015
Vanguard Long-Term Treasury Index Fund (VLGIX)	-6.411	-0.047	0.000	-0.018	0.013	-6.463	-0.051
Vanguard Extended Duration Treasury Index Fund (VEDTX)	-12.974	-0.052	0.000	-0.286	0.003	-13.310	-0.335
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	4.945	-0.053	0.000	0.067	0.014	4.973	0.028
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	3.212	-0.052	0.000	0.137	-0.003	3.294	0.082
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	-1.945	-0.049	0.000	0.115	0.009	-1.870	0.075

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Pricing impact includes differences in external pricing vendor inputs.

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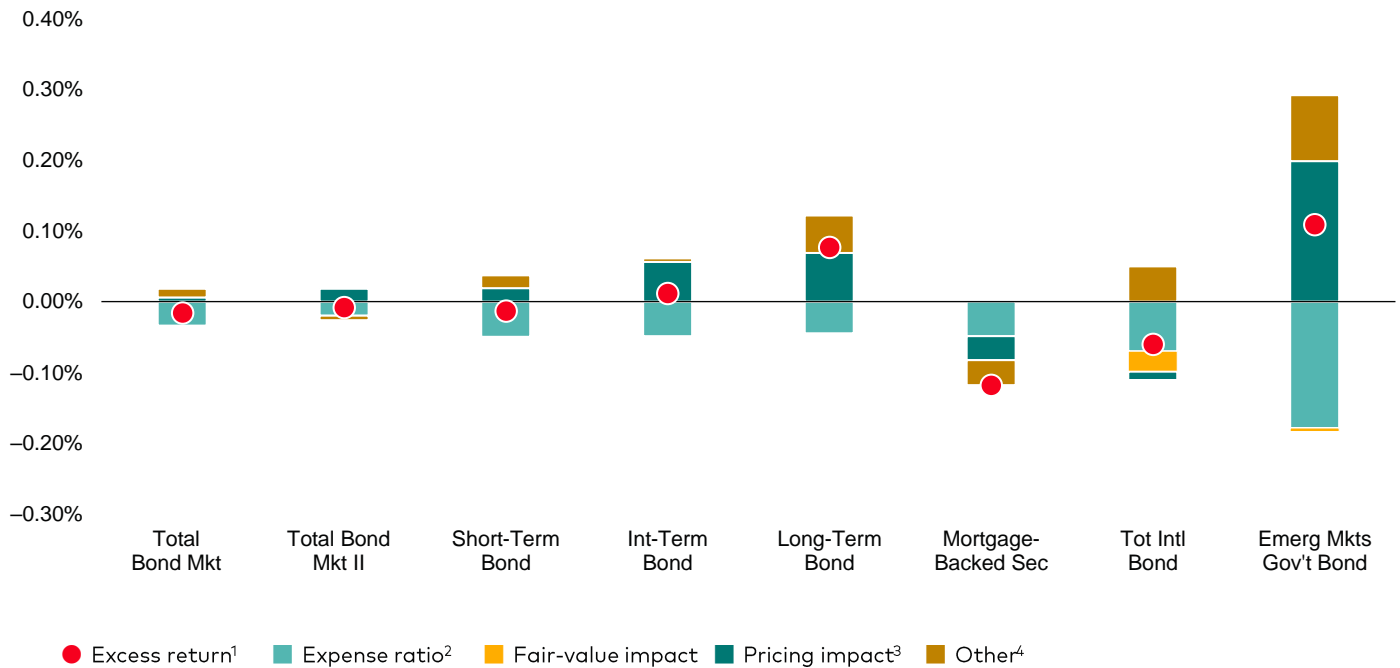
⁴ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for all Vanguard taxable fixed income index funds

Figure 13.1 Three-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Total Bond Market Index Fund (VBTIX)	-2.385	-0.034	0.000	0.006	0.012	-2.401	-0.016
Vanguard Total Bond Market II Index Fund (VTBNX)	-2.385	-0.020	0.000	0.018	-0.006	-2.393	-0.008
Vanguard Short-Term Bond Index Fund (VBITX)	0.940	-0.050	0.000	0.019	0.018	0.927	-0.013
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	-2.247	-0.049	0.000	0.056	0.005	-2.236	0.012
Vanguard Long-Term Bond Index Fund (VBLLX)	-9.199	-0.045	0.000	0.069	0.053	-9.122	0.077
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	-1.858	-0.049	0.000	-0.034	-0.035	-1.975	-0.118
Vanguard Total International Bond Index Fund (VTIFX)	-0.495	-0.070	-0.029	-0.012	0.050	-0.555	-0.060
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	-1.012	-0.179	-0.005	0.199	0.093	-0.903	0.109

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Pricing impact includes differences in external pricing vendor inputs.

³ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

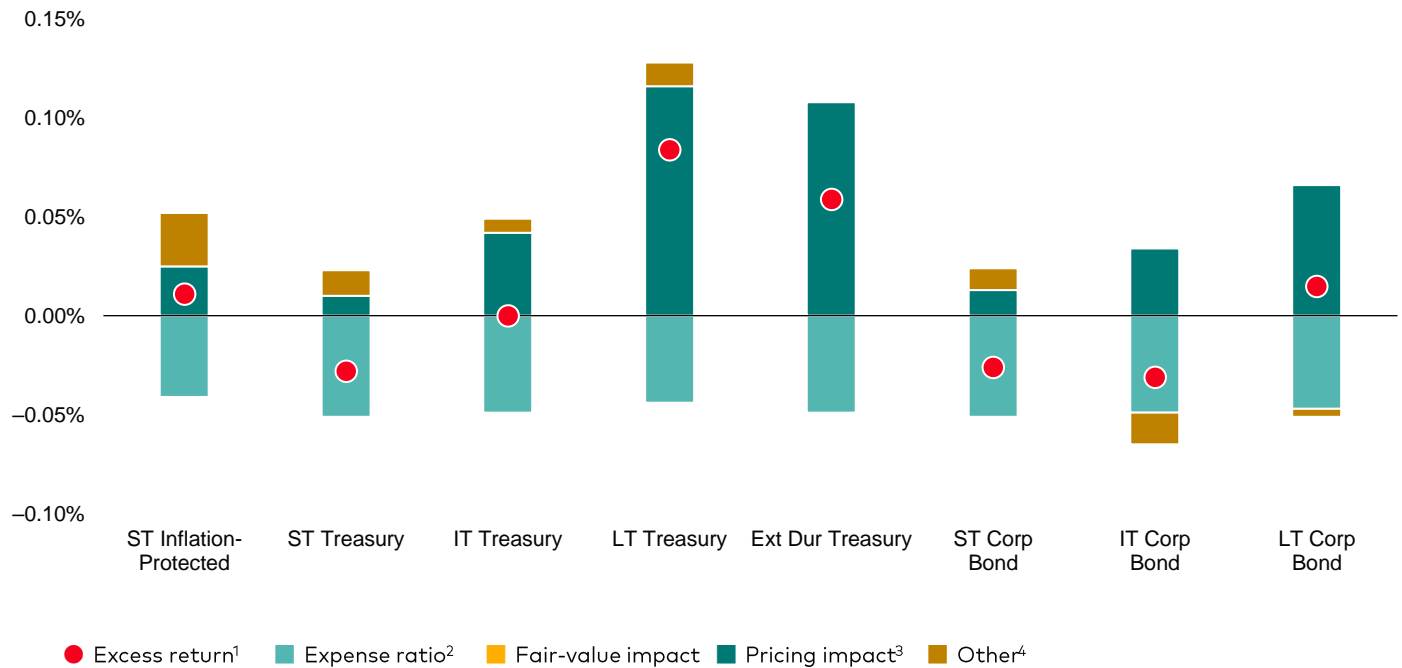
⁴ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for all Vanguard taxable fixed income index funds

Figure 14.1 Three-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Pricing impact ²	Other ³	Fund return	Excess return ⁴
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	2.114	-0.041	0.000	0.025	0.027	2.126	0.011
Vanguard Short-Term Treasury Index Fund (VSBIX)	1.431	-0.051	0.000	0.010	0.013	1.403	-0.028
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	-1.869	-0.049	0.000	0.042	0.007	-1.870	-0.000
Vanguard Long-Term Treasury Index Fund (VLGIX)	-11.961	-0.044	0.000	0.116	0.012	-11.878	0.084
Vanguard Extended Duration Treasury Index Fund (VEDTX)	-18.798	-0.049	0.000	0.108	-0.000	-18.739	0.059
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	1.700	-0.051	0.000	0.013	0.011	1.673	-0.026
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	-1.100	-0.049	0.000	0.034	-0.016	-1.131	-0.031
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	-6.820	-0.047	0.000	0.066	-0.004	-6.804	0.015

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Pricing impact includes differences in external pricing vendor inputs.

³ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

⁴ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Equity market and fund performance

IN THIS SECTION:

Equity markets overview

Performance and attribution for Vanguard equity index funds



U.S. equity markets overview

Figure 16.1 U.S. size returns

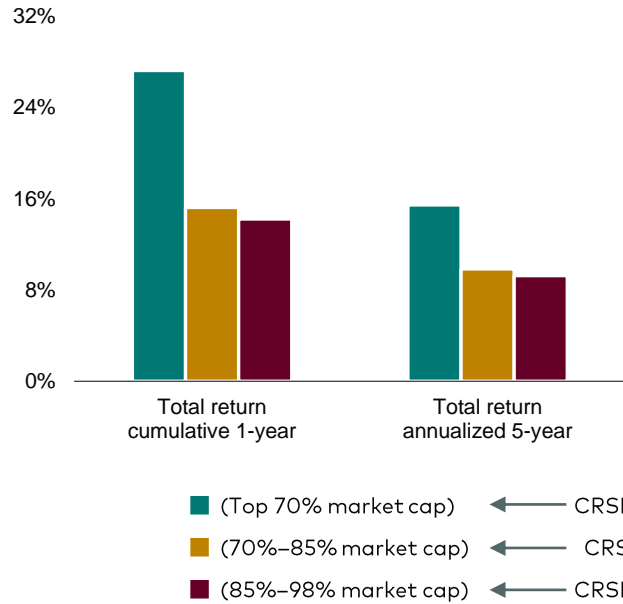


Figure 16.2 U.S. style returns

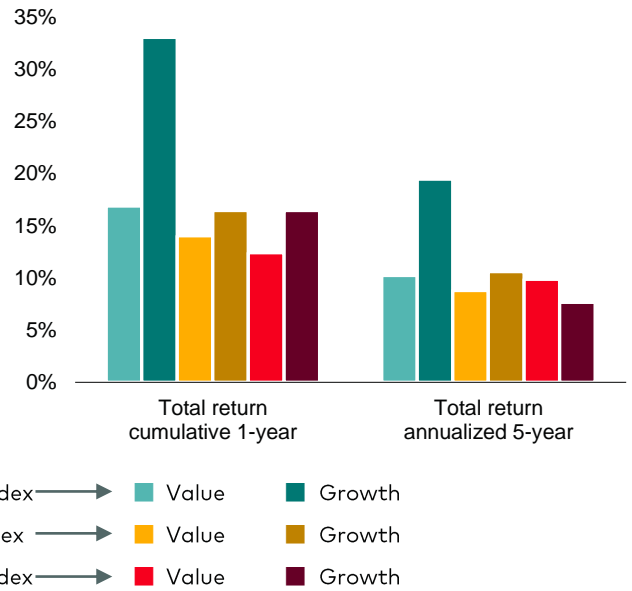
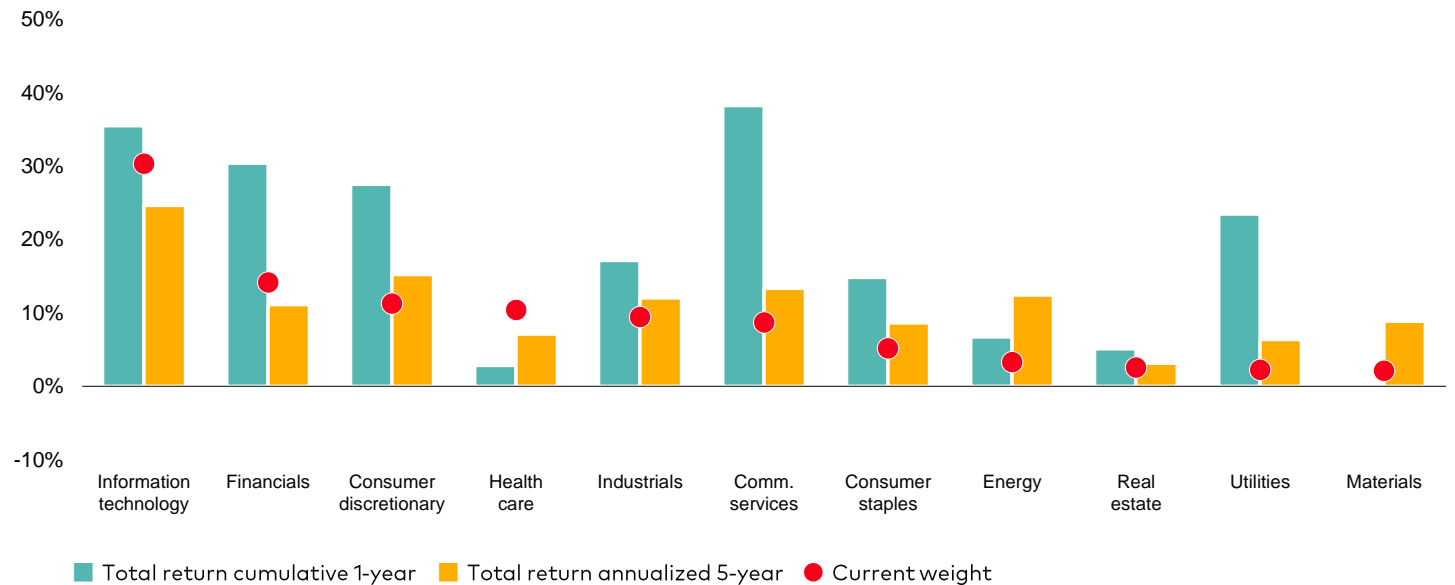


Figure 16.3 CRSP Total Stock Market: Sector exposures and returns



Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.



Global equity markets overview

Figure 17.1 Regional returns

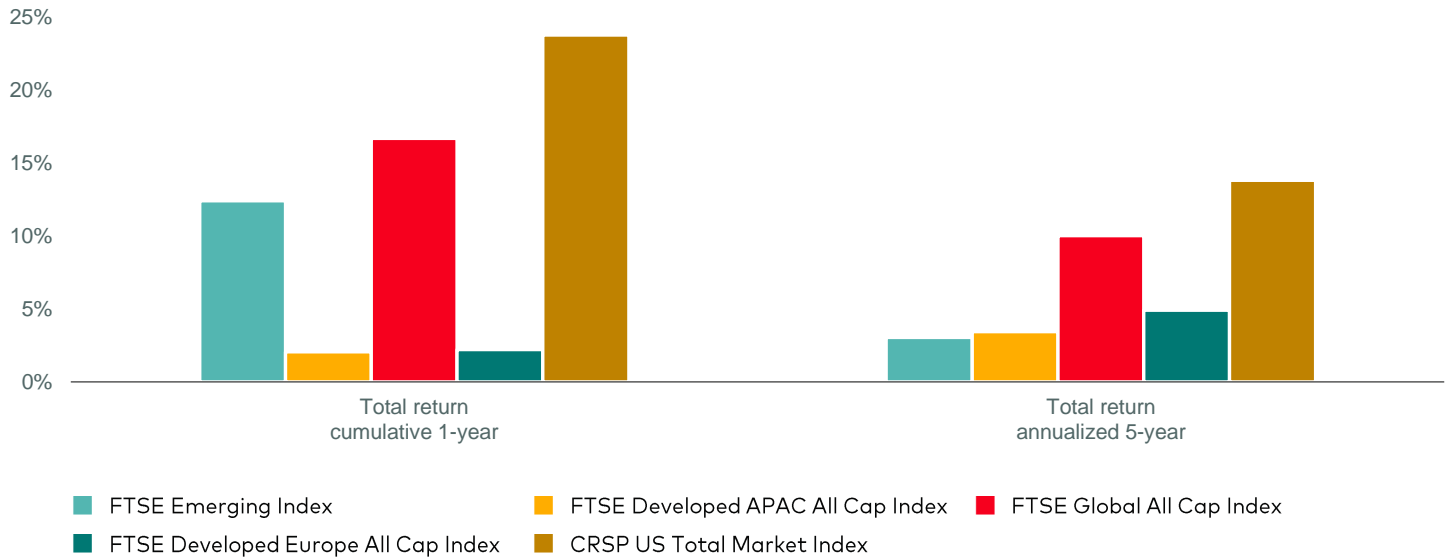


Figure 17.2 FTSE All Cap Developed ex-U.S.: Largest markets and returns¹

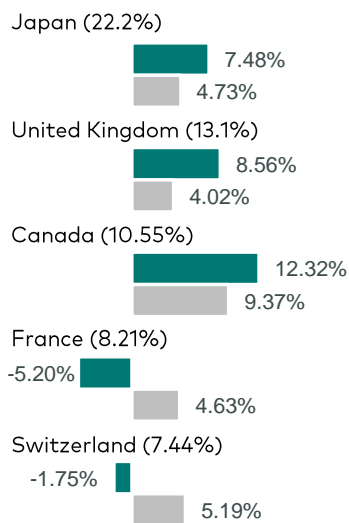
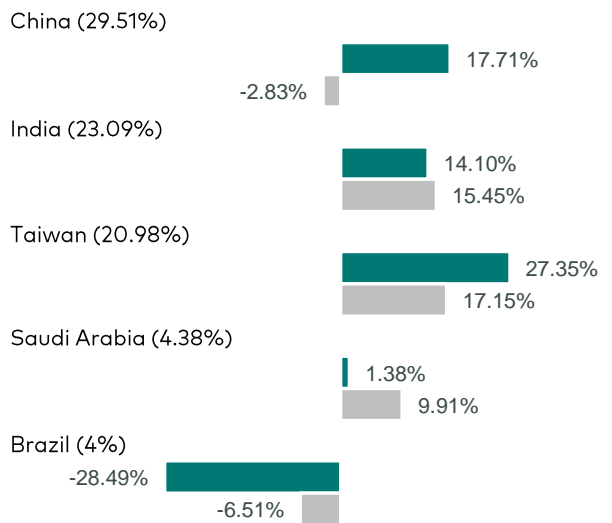


Figure 17.3 FTSE All Cap Emerging: Largest markets and returns¹



Market name (index weight) ■ Total return cumulative 1-year ■ Total return annualized 5-year

Source: FactSet. All data as of December 31, 2024, unless otherwise noted.

¹ Global benchmarks include other countries not listed above.

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.



Performance for selected Vanguard equity index funds

Figure 18.1 Fund net returns since inception

	Expense ratio	3 months	1 year	3 years	5 years	10 years	Since inception	Inception date
Vanguard Total Stock Market Index Fnd (VITSX)	0.03	2.63	23.75	7.87	13.81	12.50	9.12	7/7/1997
Vanguard Mega Cap Index Fnd (VMCTX)	0.06	3.21	27.17	9.72	15.41	13.71	11.60	2/22/2008
Vanguard Institutional Index Fnd (VINIX)	0.04	2.40	24.97	8.90	14.49	13.07	10.71	7/31/1990
Vanguard Extended Market Index Fnd (VIEIX)	0.05	4.69	16.91	2.54	9.90	9.47	9.01	7/7/1997
Vanguard Large-Cap Index Fnd (VLISX)	0.04	2.74	25.12	8.55	14.49	13.02	10.78	6/30/2005
Vanguard Mid-Cap Index Fnd (VMCIX)	0.04	0.45	15.23	2.81	9.86	9.56	10.00	5/21/1998
Vanguard Small-Cap Index Fnd (VSCIX)	0.04	1.66	14.23	3.63	9.31	9.10	9.07	7/7/1997
Vanguard Developed Markets Index Fnd (VTMNX)	0.06	-8.17	3.00	0.91	4.77	5.49	4.60	1/4/2001
Vanguard Emerging Markets Stock Index Fnd (VEMIX)	0.10	-5.36	11.00	-0.09	3.02	4.03	6.56	6/22/2000
Vanguard Total International Stock Index Fnd (VTSNX)	0.09	-7.40	5.18	0.69	4.31	5.09	4.91	11/29/2010

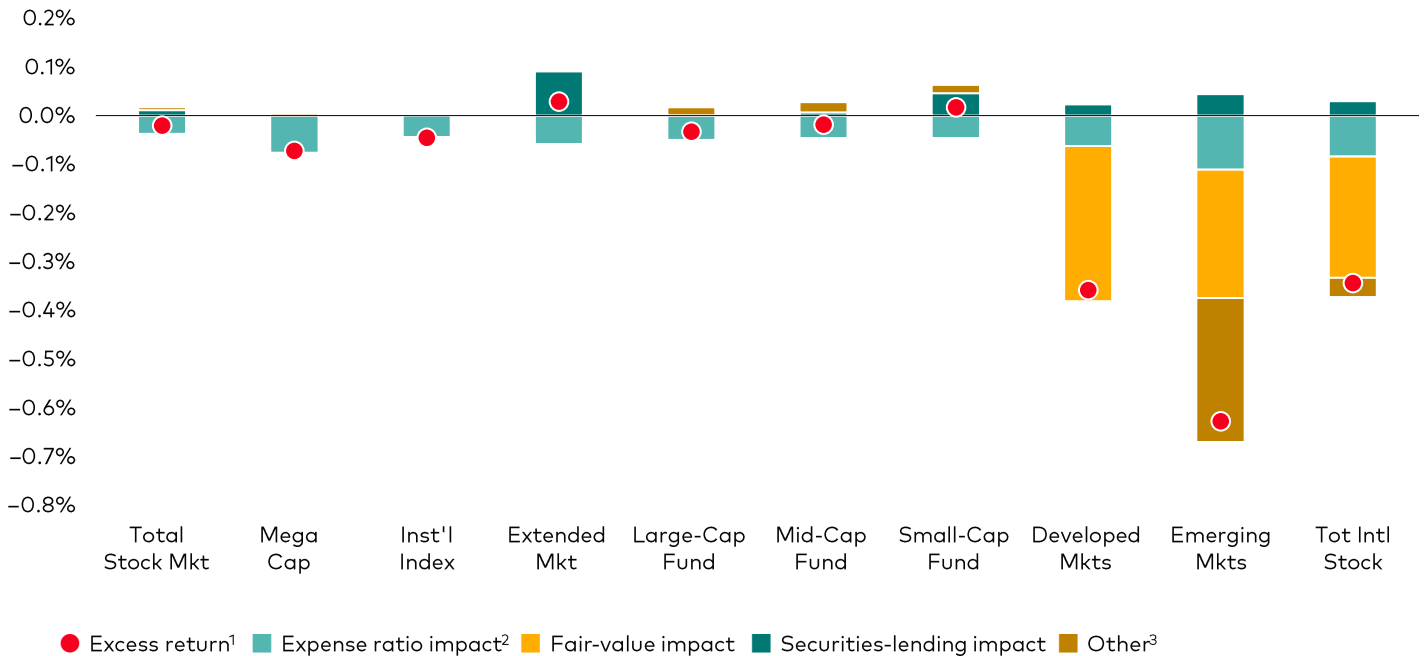
Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at institutional.vanguard.com/performance.



Attribution for selected Vanguard equity index funds

Figure 19.1 Year-to-date excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities-lending impact	Other ²	Fund return	Excess return ³
Vanguard Total Stock Market Index Fund (VITSX)	23.772	-0.037	0.000	0.011	0.006	23.751	-0.020
Vanguard Mega Cap Index Fund (VMCTX)	27.243	-0.076	0.000	0.000	0.005	27.171	-0.072
Vanguard Institutional Index Fund (VINIX)	25.020	-0.044	0.000	0.000	-0.001	24.975	-0.045
Vanguard Extended Market Index Fund (VIEIX)	16.884	-0.058	0.000	0.091	-0.004	16.913	0.029
Vanguard Large-Cap Index Fund (VLISX)	25.152	-0.050	0.000	0.001	0.016	25.120	-0.033
Vanguard Mid-Cap Index Fund (VMCIX)	15.251	-0.046	0.000	0.007	0.021	15.233	-0.018
Vanguard Small-Cap Index Fund (VSCIX)	14.217	-0.046	0.000	0.046	0.017	14.234	0.017
Vanguard Developed Markets Index Fund (VTMNX)	3.356	-0.062	-0.319	0.023	0.000	2.998	-0.358
Vanguard Emerging Markets Stock Index Fund (VEMIX)	11.626	-0.111	-0.263	0.044	-0.296	11.000	-0.627
Vanguard Total International Stock Index Fund (VTSNX)	5.525	-0.084	-0.249	0.030	-0.039	5.182	-0.343

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology)), and security pricing differences with the benchmark.

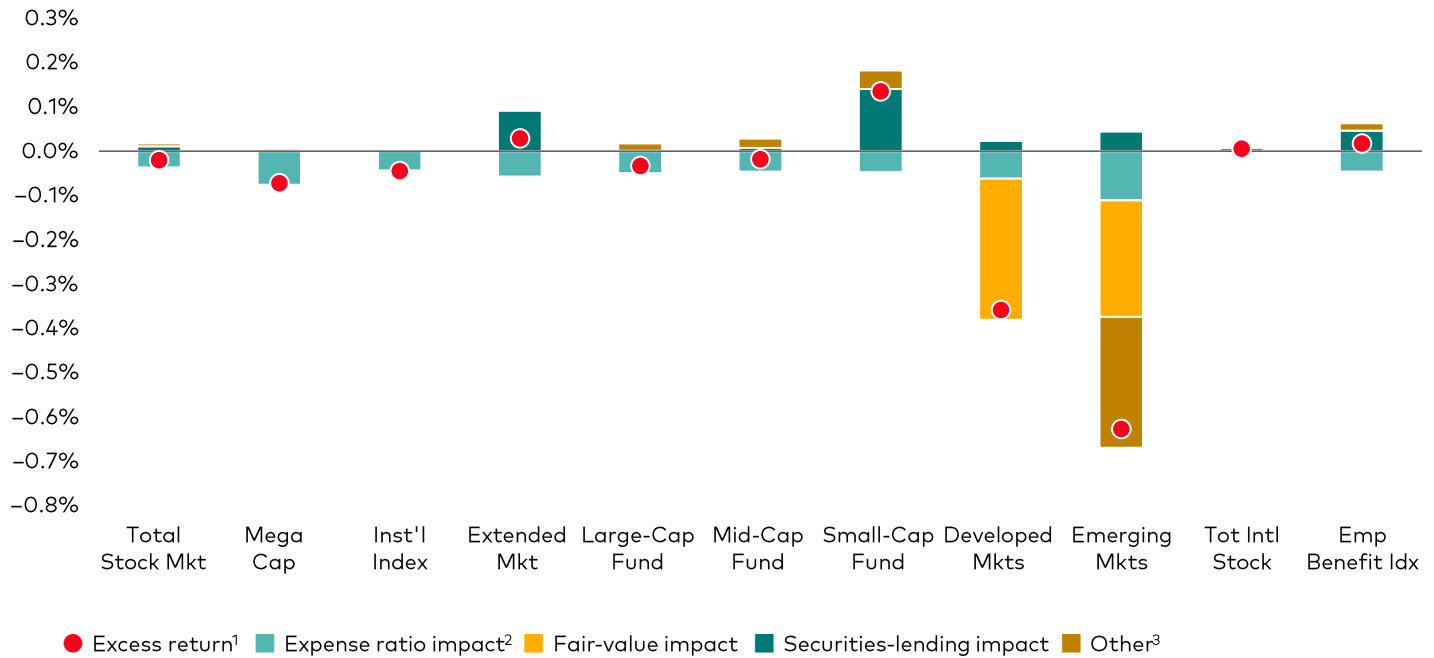
³ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for selected Vanguard equity index funds

Figure 20.1 One-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities-lending impact	Other ²	Fund return	Excess return ³
Vanguard Total Stock Market Index Fund (VITSX)	23.772	-0.037	0.000	0.011	0.006	23.751	-0.020
Vanguard Mega Cap Index Fund (VMCTX)	27.243	-0.076	0.000	0.000	0.005	27.171	-0.072
Vanguard Institutional Index Fund (VINIX)	25.020	-0.044	0.000	0.000	-0.001	24.975	-0.045
Vanguard Extended Market Index Fund (VIEIX)	16.884	-0.058	0.000	0.091	-0.004	16.913	0.029
Vanguard Large-Cap Index Fund (VLISX)	25.152	-0.050	0.000	0.001	0.016	25.120	-0.033
Vanguard Mid-Cap Index Fund (VMCIX)	15.251	-0.046	0.000	0.007	0.021	15.233	-0.018
Vanguard Small-Cap Index Fund (VSCIX)	14.217	-0.046	0.000	0.046	0.017	14.234	0.017
Vanguard Developed Markets Index Fund (VTMNX)	3.356	-0.062	-0.319	0.023	0.000	2.998	-0.358
Vanguard Emerging Markets Stock Index Fund (VEMIX)	11.626	-0.111	-0.263	0.044	-0.296	11.000	-0.627
Vanguard Total International Stock Index Fund (VTSNX)	5.525	-0.084	-0.249	0.030	-0.039	5.182	-0.343
Vanguard Employee Benefit Index Fund	25.020	-0.001	0.000	0.000	0.007	25.026	0.006

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

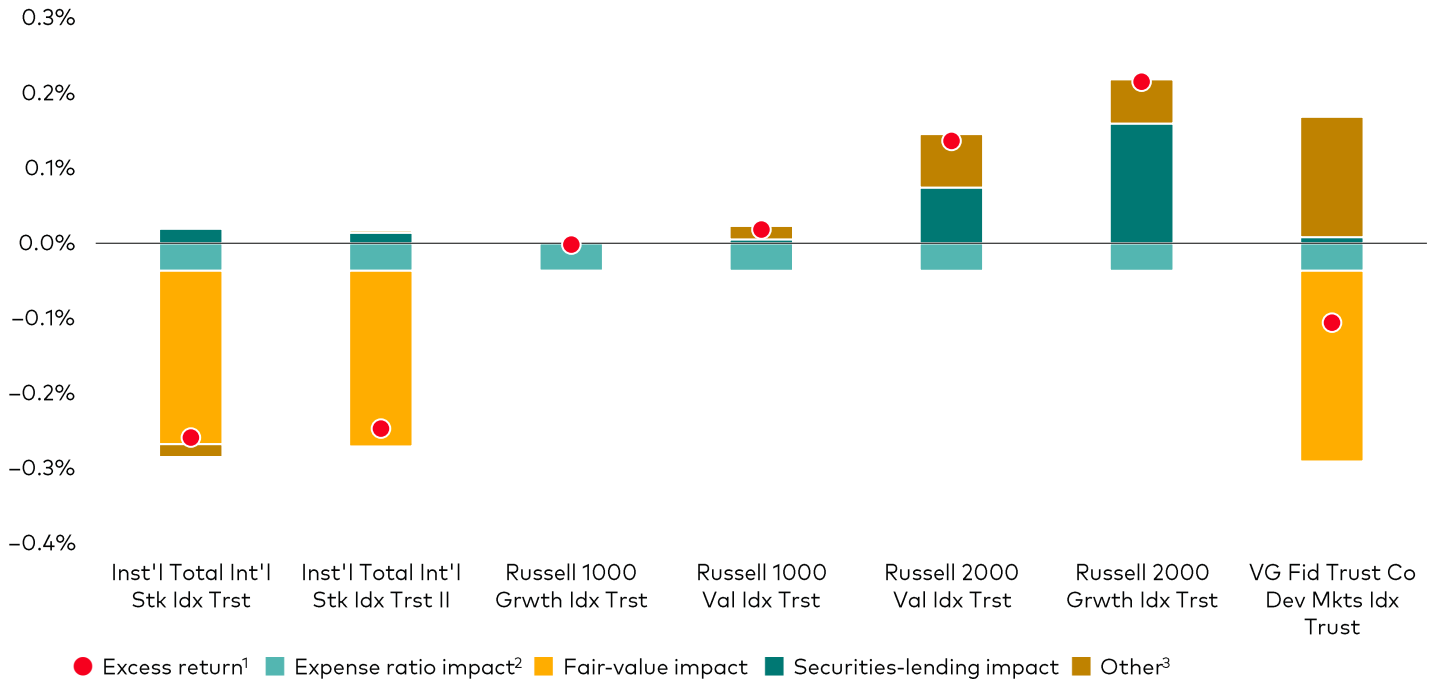
³ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for selected Vanguard equity index trusts

Figure 21.1 One-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities-lending impact	Other ²	Fund return	Excess return ³
Vanguard Institutional Total International Stock Index Trust	5.525	-0.030	-0.231	0.019	-0.017	5.266	-0.259
Vanguard Institutional Total International Stock Market Index Trust II	5.525	-0.030	-0.234	0.014	0.003	5.278	-0.247
Vanguard Russell 1000 Growth Index Trust	33.356	-0.002	0.000	0.001	-0.001	33.354	-0.002
Vanguard Russell 1000 Value Index Trust	14.368	-0.005	0.000	0.005	0.018	14.387	0.018
Vanguard Russell 2000 Value Index Trust	8.055	-0.009	0.000	0.074	0.071	8.190	0.136
Vanguard Russell 2000 Growth Index Trust	15.154	-0.003	0.000	0.159	0.059	15.369	0.215
Vanguard Fiduciary Trust Company Developed Markets Index Trust	3.356	-0.020	-0.254	0.008	0.160	3.250	-0.106

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology)), and security pricing differences with the benchmark.

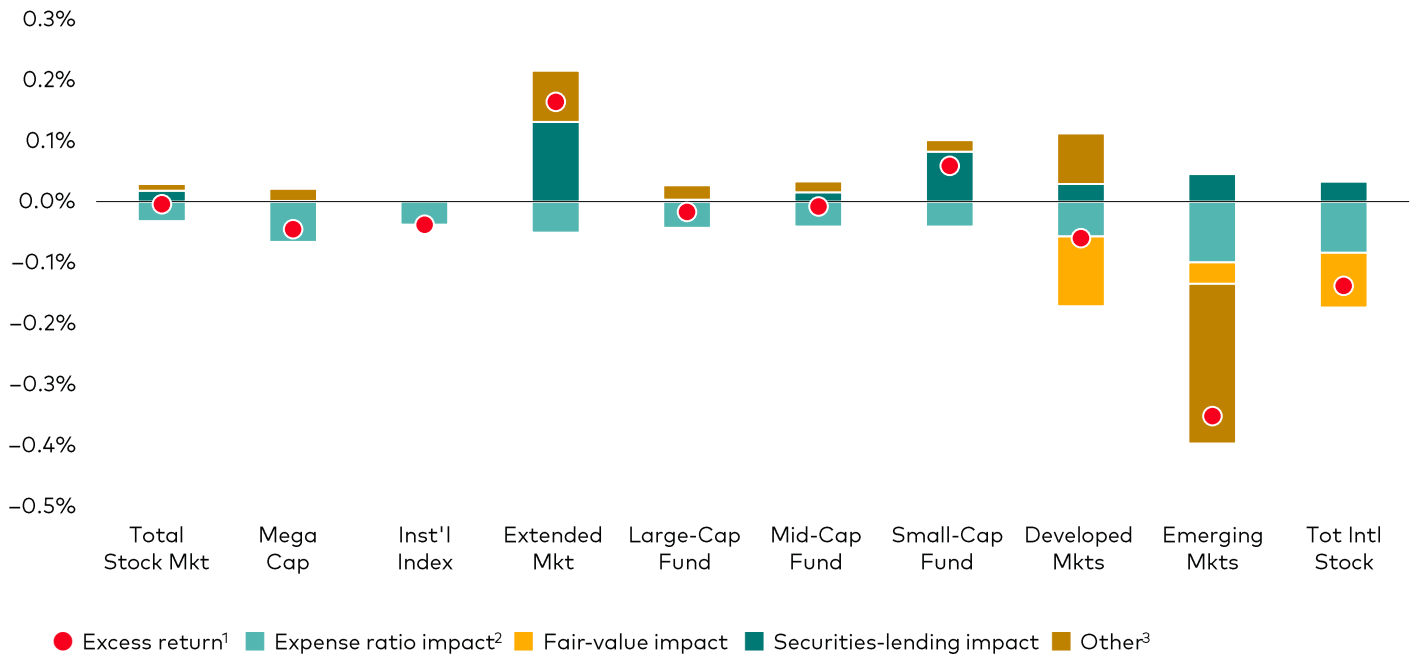
³ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.



Attribution for selected Vanguard equity index funds

Figure 22.1 Three-year excess return performance attribution as of December 31, 2024



	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities-lending impact	Other ²	Fund return	Excess return ³
Vanguard Total Stock Market Index Fund (VITMX)	7.873	-0.032	0.000	0.018	0.011	7.870	-0.004
Vanguard Mega Cap Index Fund (VMCTX)	9.766	-0.066	0.000	0.001	0.020	9.721	-0.045
Vanguard Institutional Index Fund (VINIX)	8.940	-0.038	0.000	0.000	0.000	8.902	-0.038
Vanguard Extended Market Index Fund (VIEIX)	2.378	-0.051	0.000	0.131	0.084	2.542	0.164
Vanguard Large-Cap Index Fund (VLISX)	8.566	-0.043	0.000	0.003	0.024	8.549	-0.017
Vanguard Mid-Cap Index Fund (VMCIX)	2.817	-0.041	0.000	0.015	0.018	2.809	-0.008
Vanguard Small-Cap Index Fund (VSCIX)	3.566	-0.041	0.000	0.082	0.019	3.625	0.059
Vanguard Developed Markets Index Fund (VTMNX)	0.968	-0.057	-0.115	0.029	0.083	0.908	-0.060
Vanguard Emerging Markets Stock Index Fund (VEMIX)	0.263	-0.100	-0.035	0.045	-0.262	-0.089	-0.352
Vanguard Total International Stock Index Fund (VTSNX)	0.832	-0.084	-0.090	0.033	0.002	0.694	-0.138

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.

Past performance is no guarantee of future returns.





Performance for all Vanguard equity index funds

	Expense ratio	3 months	1 year	3 years	5 years	10 years	Since inception	Inception date
All-cap								
Vanguard Total Stock Market Index Fnd (VITSX)	0.03	2.63	23.75	7.87	13.81	12.50	9.12	7/7/1997
Vanguard Instl Total Stock Market Index Fnd (VITNX)	0.03	2.62	23.77	7.89	13.83	12.52	9.65	8/31/2001
Vanguard High Dividend Yield ETF (VYM)								
Market price	—	0.28	17.56	7.65	9.75	9.77	8.61	11/10/2006
NAV	0.06	0.27	17.60	7.65	9.74	9.77	8.61	11/10/2006
Vanguard Russell 3000 Index Fnd (VRTTX)	0.08	2.61	23.71	7.95	13.79	12.47	13.65	11/1/2010
Large-cap								
Vanguard Institutional Index Fnd (VINIX)	0.04	2.40	24.97	8.90	14.49	13.07	10.71	7/31/1990
Vanguard Tax-Managed Capital Apprec. Fnd (VTCIX)	0.06	2.59	23.81	8.29	14.30	13.03	8.54	2/24/1999
Vanguard FTSE Social Index Fnd (VFTNX)	0.12	3.60	26.01	7.97	14.55	13.48	10.53	1/14/2003
Vanguard Large-Cap Index Fnd (VLISX)	0.04	2.74	25.12	8.55	14.49	13.02	10.78	6/30/2005
Vanguard Mega Cap Index Fnd (VMCTX)	0.06	3.21	27.17	9.72	15.41	13.71	11.60	2/22/2008
Vanguard Mega Cap Growth Index Fnd (VMGAX)	0.06	6.81	32.98	10.23	19.41	16.58	13.96	4/3/2008
Vanguard Mega Cap Value Index Fnd (VMVLX)	0.06	-2.22	16.86	8.02	10.22	10.31	9.10	3/5/2008
Vanguard Value Index Fnd (VIVIX)	0.04	-2.52	15.98	7.47	9.94	10.00	7.49	7/2/1998
Vanguard Growth Index Fnd (VIGIX)	0.04	6.97	32.68	9.20	18.37	15.76	9.36	5/14/1998
Vanguard 500 Index Fnd Admiral™ (VFIAX)	0.04	2.40	24.97	8.89	14.48	13.06	8.29	11/13/2000
Vanguard S&P 500 Growth ETF (VOOG)								
Market price	—	6.17	35.85	7.58	16.97	15.14	16.34	9/7/2010
NAV	0.10	6.15	35.92	7.59	16.97	15.15	16.34	9/7/2010
Vanguard S&P 500 Value Index Fnd (VSPVX)	0.08	-2.68	12.22	9.08	10.41	—	10.02	3/3/2015
Vanguard Russell 1000 Index Fnd (VRNIX)	0.07	2.73	24.43	8.36	14.22	12.79	13.93	10/15/2010
Vanguard Russell 1000 Value Index Fnd (VRVIX)	0.07	-1.99	14.32	5.57	8.63	8.41	10.46	12/10/2010
Vanguard Russell 1000 Growth Index Fnd (VRGWX)	0.07	7.05	33.25	10.42	18.89	16.70	16.42	12/6/2010
Vanguard Dividend Apprec. Index Fnd Adm (VDADX)	0.08	-0.74	16.99	6.50	11.51	11.37	11.43	12/19/2013
Vanguard Employee Benefit Index Fnd	—	2.41	25.03	8.95	14.54	13.12	11.68	9/30/1985
Vanguard Russell 1000 Growth Index Trust	—	7.07	33.35	10.49	18.98	16.79	12.64	9/30/2003
Vanguard Russell 1000 Value Index Trust	—	-1.98	14.39	5.65	8.71	8.52	8.91	9/30/2003
Mid-cap								
Vanguard Extended Market Index Fnd (VIEIX)	0.05	4.69	16.91	2.54	9.90	9.47	9.01	7/7/1997
Vanguard Mid-Cap Index Fnd (VMCIX)	0.04	0.45	15.23	2.81	9.86	9.56	10.00	5/21/1998
Vanguard S&P Mid-Cap 400 Index Fnd (VSPMX)	0.08	0.32	13.85	4.80	10.26	9.61	10.54	3/28/2011
Vanguard S&P Mid-Cap 400 Grth Index Fnd (VMFGX)	0.08	-0.81	15.86	3.29	9.93	9.79	10.47	3/28/2011
Vanguard S&P Mid-Cap 400 Value Idx Fnd (VMFVX)	0.08	1.53	11.65	6.20	10.16	9.08	11.15	11/2/2010
Vanguard Mid-Cap Grth Index Fnd Adm (VMGMX)	0.07	4.50	16.41	0.66	10.57	10.40	12.60	9/27/2011
Vanguard Mid-Cap Value Index Fnd Adm (VMVAX)	0.07	-2.96	14.03	4.85	8.76	8.50	12.00	9/27/2011

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at institutional.vanguard.com/performance.



Performance for all Vanguard equity index funds

	Expense ratio	3 months	1 year	3 years	5 years	10 years	Since inception	Inception date
Small-cap								
Vanguard Tax-Managed Small-Cap Fnd (VTSIX)	0.11	-0.55	8.64	1.86	8.34	8.92	10.00	4/21/1999
Vanguard Small-Cap Index Fnd (VSCIX)	0.10	1.66	14.23	3.63	9.31	9.10	9.07	7/7/1997
Vanguard Small-Cap Value Index Fnd (VSIIIX)	0.10	-0.76	12.41	5.75	9.91	8.68	9.98	12/7/1999
Vanguard Small-Cap Growth Index Fnd (VSGIX)	0.10	4.82	16.50	0.43	7.70	9.10	9.23	5/24/2000
Vanguard S&P Small-Cap 600 Index Fnd (VSMSX)	0.10	-0.60	8.63	1.84	8.33	8.94	10.22	4/1/2011
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)								
Market price	—	0.00	0.00	0.00	0.00	0.00	0.00	1/0/1900
NAV	0.10	-2.65	9.44	0.28	8.09	9.38	12.40	9/7/2010
Vanguard S&P Small-Cap 600 Value Idx Fnd (VSMVX)	0.10	1.41	7.52	3.15	8.12	8.18	8.49	11/19/2014
Vanguard Russell 2000 Index Fnd (VRTIX)	0.10	0.34	11.58	1.30	7.48	7.90	9.23	12/22/2010
Vanguard Russell 2000 Value Index Fnd (VRTVX)	0.10	-1.07	8.06	1.96	7.34	7.17	9.31	7/13/2012
Vanguard Russell 2000 Growth Index Fnd (VRTGX)	0.00	1.71	15.25	0.31	6.96	8.22	9.56	5/25/2011
Vanguard Russell 2000 Growth Index Trust	—	1.75	15.37	0.40	7.05	8.31	9.34	9/30/2003
Vanguard Russell 2000 Value Index Trust	—	-1.03	8.19	2.06	7.43	7.26	8.51	9/30/2003
Sector								
Vanguard Real Estate Index Fnd (VGSNX)	0.11	-7.63	4.94	-4.67	3.01	5.08	7.92	12/2/2003
Vanguard Energy Index Fnd Admiral (VENAX)	0.10	-0.35	6.57	20.21	12.69	4.40	6.86	10/7/2004
Vanguard Materials Index Fnd Admiral (VMIAX)	0.10	-10.77	0.46	0.26	8.91	7.76	8.45	2/11/2004
Vanguard Industrials Index Fnd Admiral (VINAX)	0.10	-1.73	16.97	9.41	12.17	10.86	9.25	5/8/2006
Vanguard Consumer Discretionary Index Fnd Admiral (VCDAX)	0.10	10.44	24.39	4.22	15.95	13.79	11.76	7/14/2005
Vanguard Consumer Staples Idx Fnd Admiral (VCSAX)	0.10	-2.66	13.32	4.46	8.24	8.10	9.56	1/30/2004
Vanguard Health Care Index Fnd Admiral (VHCIX)	0.10	-9.78	2.65	-0.20	7.21	8.83	9.53	2/5/2004
Vanguard Financials Index Fnd Admiral (VFAIX)	0.10	7.98	30.48	9.32	11.59	11.38	6.49	2/4/2004
Vanguard Information Technology Idx Fnd Adm (VITAX)	0.10	6.08	29.26	11.55	21.44	20.76	14.40	3/25/2004
Vanguard Communication Services Index Fnd Admiral (VTCAX)	0.10	6.82	33.11	5.66	11.60	8.20	8.15	3/11/2005
Vanguard Utilities Index Fnd Admiral (VUIAX)	0.10	-5.31	23.06	4.82	6.04	8.21	9.53	4/28/2004

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited. For performance data current to the most recent month-end, visit our website at institutional.vanguard.com/performance.



Performance for all Vanguard equity index funds

	Expense ratio	3 months	1 year	3 years	5 years	10 years	Since inception	Inception date
International								
Vanguard Developed Markets Index Fnd (VTMNX)	0.06	-8.17	3.00	0.91	4.77	5.49	4.60	1/4/2001
Vanguard European Stock Index Fnd (VESIX)	0.09	-9.53	2.04	0.94	4.96	5.28	4.37	5/15/2000
Vanguard Pacific Stock Index Fnd (VPKIX)	0.08	-8.35	1.29	-0.23	3.27	5.15	3.32	5/15/2000
Vanguard Emerging Markets Stock Index Fnd (VEMIX)	0.10	-5.36	11.00	-0.09	3.02	4.03	6.56	6/22/2000
Vanguard Int'l Dividend Appreciation Index Fnd Admiral (VIAAX)	0.16	-9.15	2.61	-0.24	5.14	—	7.65	3/2/2016
<i>Fund Purchase Transaction Fee: 0.25</i>								
<i>Fund Redemption Fee: 0.25</i>								
Vanguard Int'l High Dividend Yield Index Fnd Admiral (VIHAX)	0.22	-6.32	6.97	5.19	5.87	—	7.48	3/2/2016
<i>Fund Purchase Transaction Fee: 0.25</i>								
<i>Fund Redemption Fee: 0.25</i>								
Vanguard Total World Stock Index Fnd (VTWIX)	0.08	-1.21	16.47	5.20	9.94	9.33	10.60	10/9/2008
Vanguard FTSE All-World ex-US Index Fnd (VFW SX)	0.08	-7.48	5.46	1.01	4.42	5.15	3.20	4/30/2007
Vanguard FTSE All-World ex-US Small-Cap Index Fnd (VFSNX)	0.12	-7.40	2.63	-2.35	3.28	4.71	8.09	4/2/2009
Vanguard Global ex-U.S. Real Estate Index Fnd (VGRNX)	0.11	-11.92	-2.48	-7.00	-4.57	1.00	2.38	4/19/2011
<i>Fund Purchase Transaction Fee: 0.25</i>								
<i>Fund Redemption Fee: 0.25</i>								
Vanguard Total International Stock Index Fnd (VTSNX)	0.09	-7.40	5.18	0.69	4.31	5.09	4.91	11/29/2010
Vanguard Inst'l Total International Stock Market Index Trust	—	-7.43	5.27	0.78	4.41	—	7.05	6/24/2016
Vanguard Inst'l Total International Stock Market Index Trust II	0.03	-7.41	5.28	0.79	—	—	5.75	8/18/2020
Vanguard Developed Markets Index Trust	—	-8.15	3.25	0.99	—	—	1.35	12/7/2021

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

Performance data for periods of less than one year does not reflect the deduction of purchase and redemption fees that may apply. All other performance data are adjusted for purchase and redemption fees, where applicable. If these fees were included, the performance would be lower. The performance data shown represent past performance, which is not a guarantee of future results. Investment returns and principal value will fluctuate, so investors' shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data cited.

For performance data current to the most recent month-end, visit our website at institutional.vanguard.com/performance



Attribution for all Vanguard equity index funds

Year to date—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
All-cap							
Vanguard High Dividend Yield ETF (VYM)	17.65	-0.071	0.000	0.004	0.021	17.604	-0.046
Vanguard Institutional Total Stock Market Index Fund (VITNX)	23.77	-0.037	0.000	0.008	0.022	23.765	-0.007
Vanguard Russell 3000 Index Fund (VRTTX)	23.81	-0.099	0.000	0.006	-0.005	23.710	-0.098
Vanguard Total Stock Market Index Fund (VITSX)	23.77	-0.037	0.000	0.011	0.006	23.751	-0.020
Large-cap							
Vanguard 500 Index Fund Admiral™ (VFIAX)	25.02	-0.050	0.000	0.000	-0.003	24.967	-0.052
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	17.07	-0.094	0.000	0.001	0.008	16.989	-0.085
Vanguard FTSE Social Index Fund (VFTNX)	26.14	-0.151	0.000	0.002	0.016	26.007	-0.133
Vanguard Growth Index Fund (VIGIX)	32.73	-0.053	0.000	0.000	0.000	32.682	-0.053
Vanguard Institutional Index Fund (VINIX)	25.02	-0.044	0.000	0.000	-0.001	24.975	-0.045
Vanguard Large-Cap Index Fund (VLISX)	25.15	-0.050	0.000	0.001	0.016	25.120	-0.033
Vanguard Mega Cap Growth Index Fund (VMGAX)	33.07	-0.080	0.000	0.000	-0.010	32.977	-0.089
Vanguard Mega Cap Index Fund (VMCTX)	27.24	-0.076	0.000	0.000	0.005	27.171	-0.072
Vanguard Mega Cap Value Index Fund (VMVLX)	16.90	-0.070	0.000	0.000	0.022	16.857	-0.048
Vanguard Russell 1000 Growth Index Fund (VRGWX)	33.36	-0.093	0.000	0.001	-0.016	33.248	-0.109
Vanguard Russell 1000 Index Fund (VRNIX)	24.51	-0.087	0.000	0.003	0.007	24.434	-0.077
Vanguard Russell 1000 Value Index Fund (VRVIX)	14.37	-0.080	0.000	0.005	0.022	14.316	-0.053
Vanguard S&P 500 Growth ETF (VOOG)	36.07	-0.136	0.000	0.000	-0.018	35.920	-0.154
Vanguard S&P 500 Value Index Fund (VSPVX)	12.29	-0.090	0.000	0.001	0.018	12.216	-0.071
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	24.51	-0.074	0.000	0.000	-0.627	23.810	-0.701
Vanguard Value Index Fund (VIVIX)	16.00	-0.046	0.000	0.002	0.020	15.980	-0.024
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	16.88	-0.058	0.000	0.091	-0.004	16.913	0.029
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	16.48	-0.082	0.000	0.001	0.011	16.408	-0.069
Vanguard Mid-Cap Index Fund (VMCIX)	15.25	-0.046	0.000	0.007	0.021	15.233	-0.018
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	14.05	-0.080	0.000	0.016	0.047	14.033	-0.017
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	15.94	-0.093	0.000	0.002	0.014	15.862	-0.077
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	13.93	-0.091	0.000	0.005	0.009	13.851	-0.078
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	11.71	-0.089	0.000	0.007	0.026	11.653	-0.056
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	15.15	-0.092	0.000	0.146	0.047	15.254	0.100
Vanguard Russell 2000 Index Fund (VRTIX)	11.54	-0.089	0.000	0.115	0.020	11.584	0.046
Vanguard Russell 2000 Value Index Fund (VRTVX)	8.05	-0.086	0.000	0.067	0.020	8.056	0.001
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	9.63	-0.164	0.000	0.002	-0.022	9.444	-0.184
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	8.70	-0.087	0.000	0.024	-0.003	8.632	-0.065
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	7.56	-0.086	0.000	0.046	0.002	7.524	-0.039
Vanguard Small-Cap Growth Index Fund (VSGIX)	16.48	-0.070	0.000	0.067	0.023	16.497	0.019
Vanguard Small-Cap Index Fund (VSCIX)	14.22	-0.046	0.000	0.046	0.017	14.234	0.017
Vanguard Small-Cap Value Index Fund (VSIIX)	12.42	-0.067	0.000	0.029	0.025	12.411	-0.013
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	8.70	-0.065	0.000	0.000	0.011	8.642	-0.054

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Attribution for all Vanguard equity index funds

Year to date—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
Sector							
Vanguard Communication Services Index Fund Admiral (VTCAX)	33.06	-0.133	0.000	0.129	0.059	33.112	0.055
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	24.48	-0.124	0.000	0.031	0.004	24.388	-0.090
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	13.38	-0.113	0.000	0.048	0.002	13.318	-0.063
Vanguard Energy Index Fund Admiral (VENAX)	6.67	-0.107	0.000	0.005	-0.002	6.571	-0.104
Vanguard Financials Index Fund Admiral (VFAIX)	30.61	-0.131	0.000	0.005	-0.004	30.485	-0.129
Vanguard Health Care Index Fund Admiral (VHCIX)	2.75	-0.103	0.000	0.010	-0.014	2.647	-0.107
Vanguard Industrials Index Fund Admiral (VINAX)	17.05	-0.117	0.000	0.013	0.016	16.966	-0.087
Vanguard Information Technology Index Fund Admiral (VITAX)	29.38	-0.129	0.000	0.008	0.001	29.263	-0.120
Vanguard Materials Index Fund Admiral (VMIAX)	0.54	-0.101	0.000	0.009	0.012	0.464	-0.079
Vanguard Real Estate Index Fund (VGSNX)	5.05	-0.116	0.000	0.004	0.004	4.944	-0.108
Vanguard Utilities Index Fund Admiral (VUIAX)	23.20	-0.123	0.000	0.001	-0.015	23.059	-0.137
International							
Vanguard Developed Markets Index Fund (VTMNX)	3.36	-0.062	-0.319	0.023	0.000	2.998	-0.358
Vanguard Emerging Markets Stock Index Fund (VEMIX)	11.63	-0.111	-0.263	0.044	-0.296	11.000	-0.627
Vanguard European Stock Index Fund (VESIX)	2.22	-0.092	-0.116	0.011	0.015	2.043	-0.182
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	5.80	-0.095	-0.271	0.020	0.008	5.464	-0.338
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	2.99	-0.113	-0.075	0.123	-0.287	2.634	-0.352
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	-2.56	-0.107	-0.139	0.072	0.254	-2.478	0.079
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	2.87	-0.164	-0.342	0.007	0.230	2.605	-0.269
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	7.26	-0.236	-0.145	0.022	0.069	6.970	-0.290
Vanguard Pacific Stock Index Fund (VPKIX)	2.06	-0.081	-0.676	0.024	-0.030	1.293	-0.764
Vanguard Total International Stock Index Fund (VTSNX)	5.52	-0.084	-0.249	0.030	-0.039	5.182	-0.343
Vanguard Total World Stock Index Fund (VTWIX)	16.69	-0.093	-0.090	0.013	-0.049	16.472	-0.219

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Attribution for all Vanguard equity index funds

One year—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
All-cap							
Vanguard High Dividend Yield ETF (VYM)	17.65	-0.071	0.000	0.004	0.021	17.604	-0.046
Vanguard Institutional Total Stock Market Index Fund (VITNX)	23.77	-0.037	0.000	0.008	0.022	23.765	-0.007
Vanguard Russell 3000 Index Fund (VRTTX)	23.81	-0.099	0.000	0.006	-0.005	23.710	-0.098
Vanguard Total Stock Market Index Fund (VITSX)	23.77	-0.037	0.000	0.011	0.006	23.751	-0.020
Large-cap							
Vanguard 500 Index Fund Admiral (VFIAX)	25.02	-0.050	0.000	0.000	-0.003	24.967	-0.052
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	17.07	-0.094	0.000	0.001	0.008	16.989	-0.085
Vanguard FTSE Social Index Fund (VFTNX)	26.14	-0.151	0.000	0.002	0.016	26.007	-0.133
Vanguard Growth Index Fund (VIGIX)	32.73	-0.053	0.000	0.000	0.000	32.682	-0.053
Vanguard Institutional Index Fund (VINIX)	25.02	-0.044	0.000	0.000	-0.001	24.975	-0.045
Vanguard Large-Cap Index Fund (VLISX)	25.15	-0.050	0.000	0.001	0.016	25.120	-0.033
Vanguard Mega Cap Growth Index Fund (VMGAX)	33.07	-0.080	0.000	0.000	-0.010	32.977	-0.089
Vanguard Mega Cap Index Fund (VMCTX)	27.24	-0.076	0.000	0.000	0.005	27.171	-0.072
Vanguard Mega Cap Value Index Fund (VMVLX)	16.90	-0.070	0.000	0.000	0.022	16.857	-0.048
Vanguard Russell 1000 Growth Index Fund (VRGWX)	33.36	-0.093	0.000	0.001	-0.016	33.248	-0.109
Vanguard Russell 1000 Index Fund (VRNIX)	24.51	-0.087	0.000	0.003	0.007	24.434	-0.077
Vanguard Russell 1000 Value Index Fund (VRVIX)	14.37	-0.080	0.000	0.005	0.022	14.316	-0.053
Vanguard S&P 500 Growth ETF (VOOG)	36.07	-0.136	0.000	0.000	-0.018	35.920	-0.154
Vanguard S&P 500 Value Index Fund (VSPVX)	12.29	-0.090	0.000	0.001	0.018	12.216	-0.071
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	24.51	-0.074	0.000	0.000	-0.627	23.810	-0.701
Vanguard Value Index Fund (VIVIX)	16.00	-0.046	0.000	0.002	0.020	15.980	-0.024
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	16.88	-0.058	0.000	0.091	-0.004	16.913	0.029
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	16.48	-0.082	0.000	0.001	0.011	16.408	-0.069
Vanguard Mid-Cap Index Fund (VMCIX)	15.25	-0.046	0.000	0.007	0.021	15.233	-0.018
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	14.05	-0.080	0.000	0.016	0.047	14.033	-0.017
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	15.94	-0.093	0.000	0.002	0.014	15.862	-0.077
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	13.93	-0.091	0.000	0.005	0.009	13.851	-0.078
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	11.71	-0.089	0.000	0.007	0.026	11.653	-0.056
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	15.15	-0.092	0.000	0.146	0.047	15.254	0.100
Vanguard Russell 2000 Index Fund (VRTIX)	11.54	-0.089	0.000	0.115	0.020	11.584	0.046
Vanguard Russell 2000 Value Index Fund (VRTVX)	8.05	-0.086	0.000	0.067	0.020	8.056	0.001
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	9.63	-0.164	0.000	0.002	-0.022	9.444	-0.184
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	8.70	-0.087	0.000	0.024	-0.003	8.632	-0.065
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	7.56	-0.086	0.000	0.046	0.002	7.524	-0.039
Vanguard Small-Cap Growth Index Fund (VSGIX)	16.48	-0.070	0.000	0.067	0.023	16.497	0.019
Vanguard Small-Cap Index Fund (VSCIX)	14.22	-0.046	0.000	0.046	0.017	14.234	0.017
Vanguard Small-Cap Value Index Fund (VSIX)	12.42	-0.067	0.000	0.029	0.025	12.411	-0.013
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	8.70	-0.065	0.000	0.000	0.011	8.642	-0.054

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Attribution for all Vanguard equity index funds

One year—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
Sector							
Vanguard Communication Services Index Fund Admiral (VTCAX)	33.06	-0.133	0.000	0.129	0.059	33.112	0.055
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	24.48	-0.124	0.000	0.031	0.004	24.388	-0.090
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	13.38	-0.113	0.000	0.048	0.002	13.318	-0.063
Vanguard Energy Index Fund Admiral (VENAX)	6.67	-0.107	0.000	0.005	-0.002	6.571	-0.104
Vanguard Financials Index Fund Admiral (VFAIX)	30.61	-0.131	0.000	0.005	-0.004	30.485	-0.129
Vanguard Health Care Index Fund Admiral (VHCIX)	2.75	-0.103	0.000	0.010	-0.014	2.647	-0.107
Vanguard Industrials Index Fund Admiral (VINAX)	17.05	-0.117	0.000	0.013	0.016	16.966	-0.087
Vanguard Information Technology Index Fund Admiral (VITAX)	29.38	-0.129	0.000	0.008	0.001	29.263	-0.120
Vanguard Materials Index Fund Admiral (VMIAX)	0.54	-0.101	0.000	0.009	0.012	0.464	-0.079
Vanguard Real Estate Index Fund (VGSNX)	5.05	-0.116	0.000	0.004	0.004	4.944	-0.108
Vanguard Utilities Index Fund Admiral (VUIAX)	23.20	-0.123	0.000	0.001	-0.015	23.059	-0.137
International							
Vanguard Developed Markets Index Fund (VTMNX)	3.36	-0.062	-0.319	0.023	0.000	2.998	-0.358
Vanguard Emerging Markets Stock Index Fund (VEMIX)	11.63	-0.111	-0.263	0.044	-0.296	11.000	-0.627
Vanguard European Stock Index Fund (VESIX)	2.22	-0.092	-0.116	0.011	0.015	2.043	-0.182
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	5.80	-0.095	-0.271	0.020	0.008	5.464	-0.338
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	2.99	-0.113	-0.075	0.123	-0.287	2.634	-0.352
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	-2.56	-0.107	-0.139	0.072	0.254	-2.478	0.079
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	2.87	-0.164	-0.342	0.007	0.230	2.605	-0.269
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	7.26	-0.236	-0.145	0.022	0.069	6.970	-0.290
Vanguard Pacific Stock Index Fund (VPKIX)	2.06	-0.081	-0.676	0.024	-0.030	1.293	-0.764
Vanguard Total International Stock Index Fund (VTSNX)	5.52	-0.084	-0.249	0.030	-0.039	5.182	-0.343
Vanguard Total World Stock Index Fund (VTWIX)	16.69	-0.093	-0.090	0.013	-0.049	16.472	-0.219

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Attribution for all Vanguard equity index funds

Three years—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
All-cap							
Vanguard High Dividend Yield ETF (VYM)	7.72	-0.065	0.000	0.005	-0.009	7.651	-0.069
Vanguard Institutional Total Stock Market Index Fund (VITNX)	7.87	-0.032	0.000	0.015	0.038	7.895	0.021
Vanguard Russell 3000 Index Fund (VRTTX)	8.01	-0.086	0.000	0.012	0.015	7.946	-0.060
Vanguard Total Stock Market Index Fund (VITSX)	7.87	-0.032	0.000	0.018	0.011	7.870	-0.004
Large-cap							
Vanguard 500 Index Fund Admiral (VFIAX)	8.94	-0.044	0.000	0.000	-0.003	8.894	-0.046
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	6.58	-0.085	0.000	0.000	0.003	6.496	-0.082
Vanguard FTSE Social Index Fund (VFTNX)	8.08	-0.130	0.000	0.003	0.016	7.972	-0.111
Vanguard Growth Index Fund (VIGIX)	9.24	-0.044	0.000	0.002	0.003	9.200	-0.039
Vanguard Institutional Index Fund (VINIX)	8.94	-0.038	0.000	0.000	-0.000	8.902	-0.038
Vanguard Large-Cap Index Fund (VLISX)	8.57	-0.043	0.000	0.003	0.024	8.549	-0.017
Vanguard Mega Cap Growth Index Fund (VMGAX)	10.29	-0.066	0.000	0.000	0.003	10.232	-0.063
Vanguard Mega Cap Index Fund (VMCTX)	9.77	-0.066	0.000	0.001	0.020	9.721	-0.045
Vanguard Mega Cap Value Index Fund (VMVLX)	8.03	-0.065	0.000	0.001	0.049	8.016	-0.015
Vanguard Russell 1000 Growth Index Fund (VRGWX)	10.47	-0.077	0.000	0.002	0.018	10.418	-0.057
Vanguard Russell 1000 Index Fund (VRNIX)	8.41	-0.076	0.000	0.007	0.015	8.356	-0.054
Vanguard Russell 1000 Value Index Fund (VRVIX)	5.63	-0.074	0.000	0.011	0.003	5.573	-0.061
Vanguard S&P 500 Growth ETF (VOOG)	7.70	-0.108	0.000	0.000	-0.003	7.585	-0.111
Vanguard S&P 500 Value Index Fund (VSPVX)	9.16	-0.087	0.000	0.000	0.002	9.078	-0.085
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	8.41	-0.065	0.000	0.000	-0.059	8.286	-0.124
Vanguard Value Index Fund (VIVIX)	7.46	-0.043	0.000	0.005	0.044	7.466	0.005
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	2.38	-0.051	0.000	0.131	0.084	2.542	0.164
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	0.71	-0.070	0.000	0.009	0.018	0.662	-0.044
Vanguard Mid-Cap Index Fund (VMCIX)	2.82	-0.041	0.000	0.015	0.018	2.809	-0.008
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	4.89	-0.073	0.000	0.023	0.016	4.853	-0.034
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	3.35	-0.083	0.000	0.022	0.002	3.291	-0.058
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	4.87	-0.084	0.000	0.017	0.000	4.803	-0.066
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	6.26	-0.085	0.000	0.015	0.012	6.198	-0.058
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	0.21	-0.080	0.000	0.169	0.012	0.308	0.100
Vanguard Russell 2000 Index Fund (VRTIX)	1.24	-0.081	0.000	0.129	0.016	1.305	0.064
Vanguard Russell 2000 Value Index Fund (VRTVX)	1.94	-0.082	0.000	0.084	0.017	1.961	0.020
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	0.44	-0.151	0.000	0.004	-0.015	0.276	-0.161
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	1.91	-0.082	0.000	0.017	-0.009	1.836	-0.074
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	3.21	-0.083	0.000	0.028	-0.001	3.150	-0.056
Vanguard Small-Cap Growth Index Fund (VSGIX)	0.36	-0.060	0.000	0.107	0.024	0.434	0.071
Vanguard Small-Cap Index Fund (VSCIX)	3.57	-0.041	0.000	0.082	0.019	3.625	0.059
Vanguard Small-Cap Value Index Fund (VSIIX)	5.74	-0.063	0.000	0.063	0.006	5.747	0.006
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	1.91	-0.061	0.000	0.000	0.016	1.864	-0.045

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Attribution for all Vanguard equity index funds

Three years—Institutional share class unless otherwise noted	Benchmark return	Expense ratio impact ¹	Fair-value impact	Securities lending impact	Other ²	Fund return	Excess return ³
Sector							
Vanguard Communication Services Index Fund Admiral (VTCAX)	5.58	-0.106	0.000	0.163	0.015	5.656	0.072
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	4.29	-0.104	0.000	0.032	0.002	4.224	-0.070
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	4.52	-0.105	0.000	0.049	-0.002	4.462	-0.058
Vanguard Energy Index Fund Admiral (VENAX)	20.33	-0.120	0.000	0.003	-0.000	20.214	-0.117
Vanguard Financials Index Fund Admiral (VFAIX)	9.40	-0.109	0.000	0.016	0.015	9.317	-0.079
Vanguard Health Care Index Fund Admiral (VHCIX)	-0.11	-0.100	0.000	0.009	0.007	-0.198	-0.083
Vanguard Industrials Index Fund Admiral (VINAX)	9.50	-0.109	0.000	0.014	0.007	9.411	-0.089
Vanguard Information Technology Index Fund Admiral (VITAX)	11.62	-0.112	0.000	0.009	0.028	11.549	-0.075
Vanguard Materials Index Fund Admiral (VMIAX)	0.35	-0.100	0.000	0.008	0.003	0.263	-0.089
Vanguard Real Estate Index Fund (VGSNX)	-4.57	-0.101	0.000	0.003	0.006	-4.667	-0.092
Vanguard Utilities Index Fund Admiral (VUIAX)	4.93	-0.105	0.000	0.001	-0.004	4.824	-0.108
International							
Vanguard Developed Markets Index Fund (VTMNX)	0.97	-0.057	-0.115	0.029	0.083	0.908	-0.060
Vanguard Emerging Markets Stock Index Fund (VEMIX)	0.26	-0.100	-0.035	0.045	-0.262	-0.089	-0.352
Vanguard European Stock Index Fund (VESIX)	0.85	-0.097	0.017	0.013	0.149	0.936	0.082
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	1.17	-0.088	-0.095	0.021	0.001	1.012	-0.160
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	-2.23	-0.111	-0.061	0.141	-0.093	-2.354	-0.123
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	-7.23	-0.102	-0.094	0.087	0.343	-6.998	0.234
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	-0.17	-0.160	-0.118	0.007	0.197	-0.244	-0.074
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	5.49	-0.232	-0.077	0.022	-0.012	5.193	-0.299
Vanguard Pacific Stock Index Fund (VPKIX)	0.18	-0.080	-0.342	0.035	-0.021	-0.234	-0.409
Vanguard Total International Stock Index Fund (VTSNX)	0.83	-0.084	-0.090	0.033	0.002	0.694	-0.138
Vanguard Total World Stock Index Fund (VTWIX)	5.31	-0.084	-0.032	0.019	-0.014	5.198	-0.111

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.

¹ Expense ratio impact (ER) attribution includes the impact of compounding on fund returns over time. Consequently, a fund's ER (above) may appear larger than the published ER.

² Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

³ Excess return equals fund return minus benchmark return.



Securities lending

IN THIS SECTION:

Vanguard securities-lending program
overview

Vanguard securities lending by fund

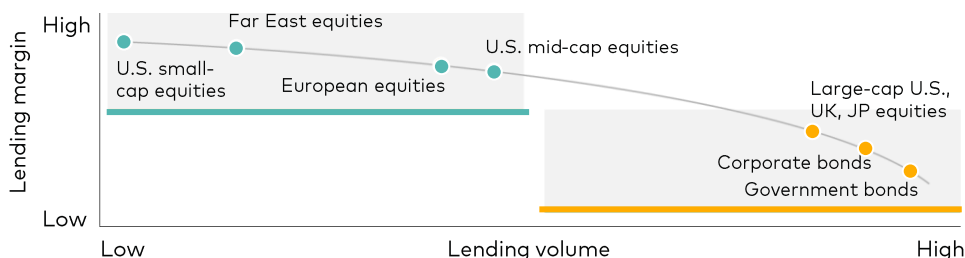


Vanguard securities-lending program overview

Lending securities from equity index funds provides an opportunity to increase portfolio returns. There are two broad strategic approaches to securities lending: value and volume. Vanguard is a value lender, meaning we seek to optimize client outcomes by maximizing revenue generation while minimizing the percentage of the portfolio on loan to manage risk. Additionally, Vanguard's at-cost lending program returns more than 95% of securities-lending revenues directly back to the funds, a competitive and shareholder-friendly return rate.

Figure 33.1 Securities-lending program overview

Vanguard's lending program focuses on lending "specials"—securities with a high lending margin—to maximize the return generated by each loan.



Asset-weighted cost (2023)	3.1%
Revenue returned to funds (2023)	96.9%
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	0.33% of gross assets

Sources: Brown Brothers Harriman (BBH) and Vanguard.

Vanguard Fixed Income Group's credit research team manages a list of approved borrowers and assigns each a credit limit. Vanguard considers the financial viability of all approved counterparties on an ongoing basis and monitors individual counterparty exposure daily. If necessary, the amounts on loan are adjusted based on changes in perceived creditworthiness of each borrowing institution. Collateral is reinvested in a conservative, internally managed, money market fund called the Market Liquidity Fund.

Total average market value on loan for 4Q2024

Goldman Sachs & Co. LLC	\$3,127,522,443
JP Morgan Securities LLC	\$2,077,506,487
Morgan Stanley & Co. LLC	\$2,058,011,169
Barclays Capital Inc	\$1,618,800,162
BofA Securities Inc	\$1,542,982,196



Market Liquidity Fund sector allocation and key characteristics

Treasuries	44.8%
Agencies	17.4%
Repurchase agreements	35.5%
Cash	2.4%

Average maturity	21
Expense ratio	0.5 bps
SEC yield	4.46%
Number of holdings	198

Securities lending from fixed income funds

Vanguard lends securities only from its equity funds. We lent securities from our fixed income funds until 2009, when market conditions made the risk-reward unattractive. We continually monitor market conditions and other factors, periodically reevaluating our securities-lending program's effectiveness in meeting its goal of giving our clients the best chance for investment success.

Numbers may not total 100% due to rounding.
Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.



Vanguard securities lending by fund

Figure 34.1 2023/2024 securities-lending data by fund

	Year	Average market value of open loans	Average % on loan	Total period earned income	Income as % of average fund assets
All-cap					
Vanguard Institutional Total Stock Market Index Fund	2023	\$73,266,654	0.26%	\$5,963,411	0.02%
	2024 YTD	\$22,957,912	0.07%	\$2,567,986	0.01%
Vanguard Russell 3000 Index Fund	2023	\$7,069,796	0.24%	\$582,676	0.02%
	2024 YTD	\$1,386,897	0.04%	\$223,047	0.01%
Vanguard High Dividend Yield Index Fund	2023	\$36,822,279	0.06%	\$3,293,054	0.01%
	2024 YTD	\$23,177,250	0.03%	\$2,868,370	0.00%
Vanguard Total Stock Market Index Fund	2023	\$3,448,565,391	0.27%	\$308,412,738	0.02%
	2024 YTD	\$3,236,641,182	0.20%	\$177,518,964	0.01%
Large-cap					
Vanguard 500 Index Fund	2023	\$78,261,604	0.01%	\$515,874	0.00%
	2024 YTD	\$64,406,307	0.01%	\$2,709,792	0.00%
Vanguard Dividend Appreciation Index Fund	2023	\$664,721	0.00%	\$4,607	0.00%
	2024 YTD	\$8,933,418	0.01%	\$666,668	0.00%
Vanguard Employee Benefit Index Fund	2023	\$11,844,156	0.06%	\$258,659	0.00%
	2024 YTD	\$6,469,911	0.03%	\$48,129	0.00%
Vanguard FTSE Social Index Fund	2023	\$8,110,997	0.06%	\$700,422	0.00%
	2024 YTD	\$2,763,482	0.01%	\$419,273	0.00%
Vanguard Growth Index Fund	2023	\$91,929,916	0.06%	\$2,333,592	0.00%
	2024 YTD	\$24,420,456	0.01%	\$540,145	0.00%
Vanguard Institutional Index Fund	2023	\$21,684,834	0.01%	\$171,120	0.00%
	2024 YTD	\$12,598,195	0.00%	\$587,448	0.00%
Vanguard Large-Cap Index Fund	2023	\$22,115,441	0.06%	\$1,119,570	0.00%
	2024 YTD	\$3,166,889	0.01%	\$656,710	0.00%
Vanguard Mega Cap Growth Index Fund	2023	\$96,451	0.00%	\$1,260	0.00%
	2024 YTD	\$57,231	0.00%	\$2,228	0.00%
Vanguard Mega Cap Index Fund	2023	\$16,383	0.00%	\$274	0.00%
	2024 YTD	\$8,587	0.00%	\$525	0.00%
Vanguard Mega Cap Value Index Fund	2023	\$0	0.00%	\$79	0.00%
	2024 YTD	\$5,931	0.00%	\$85	0.00%
Vanguard Russell 1000 Growth Index Fund	2023	\$9,189,082	0.06%	\$454,236	0.00%
	2024 YTD	\$3,088,367	0.01%	\$147,399	0.00%
Vanguard Russell 1000 Growth Index Trust	2023	\$3,798,573	0.08%	\$134,326	0.00%
	2024 YTD	\$1,693,647	0.03%	\$31,691	0.00%
Vanguard Russell 1000 Index Fund	2023	\$7,488,639	0.13%	\$685,292	0.01%
	2024 YTD	\$1,463,869	0.02%	\$181,150	0.00%
Vanguard Russell 1000 Value Index Fund	2023	\$17,030,689	0.21%	\$1,733,580	0.02%
	2024 YTD	\$6,018,105	0.06%	\$532,317	0.01%
Vanguard Russell 1000 Value Index Trust	2023	\$12,338,557	0.45%	\$585,993	0.02%
	2024 YTD	\$7,206,112	0.24%	\$149,041	0.00%
Vanguard S&P 500 Growth Index Fund	2023	\$144,383	0.00%	\$3,399	0.00%
	2024 YTD	\$39,376	0.00%	\$2,077	0.00%
Vanguard S&P 500 Value Index Fund	2023	\$1,213,664	0.03%	\$3,256	0.00%
	2024 YTD	\$249,275	0.01%	\$26,324	0.00%
Vanguard Tax-Managed Capital Appreciation Fund	2023	\$0	0.00%	\$0	0.00%
	2024 YTD	\$0	0.00%	\$0	0.00%
Vanguard Value Index Fund	2023	\$90,514,975	0.06%	\$6,668,070	0.00%
	2024 YTD	\$29,611,295	0.02%	\$4,133,625	0.00%

Cash is currently the only acceptable form of collateral. All U.S. and international equities are marked to market daily with a minimum collateralization required equal to 102% and 105%, respectively, of the market value of the security.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.



Vanguard securities lending by fund

Figure 35.1 2023/2024 securities-lending data by fund

	Year	Average market value of open loans	Average % on loan	Total period earned income	Income as % of average fund assets
Mid-cap					
Vanguard Extended Market Index Fund	2023	\$1,456,594,393	1.72%	\$141,973,884	0.17%
	2024 YTD	\$1,480,070,762	1.45%	\$92,707,124	0.09%
Vanguard Mid-Cap Growth Index Fund	2023	\$76,923,670	0.38%	\$2,060,779	0.01%
	2024 YTD	\$12,154,070	0.05%	\$333,260	0.00%
Vanguard Mid-Cap Index Fund	2023	\$466,749,867	0.33%	\$23,785,257	0.02%
	2024 YTD	\$125,362,027	0.08%	\$10,860,501	0.01%
Vanguard Mid-Cap Value Index Fund	2023	\$82,274,038	0.30%	\$6,749,974	0.02%
	2024 YTD	\$29,874,498	0.10%	\$4,770,208	0.02%
Vanguard S&P Mid-Cap 400 Growth Index Fund	2023	\$824,850	0.09%	\$22,124	0.00%
	2024 YTD	\$742,124	0.06%	\$25,381	0.00%
Vanguard S&P Mid-Cap 400 Index Fund	2023	\$10,597,155	0.36%	\$464,894	0.02%
	2024 YTD	\$6,313,904	0.18%	\$157,182	0.00%
Vanguard S&P Mid-Cap 400 Value Index Fund	2023	\$6,110,978	0.69%	\$320,209	0.04%
	2024 YTD	\$2,607,412	0.26%	\$70,920	0.01%
Small-cap					
Vanguard Russell 2000 Growth Index Fund	2023	\$25,497,343	2.66%	\$1,898,671	0.20%
	2024 YTD	\$13,154,240	1.12%	\$1,714,469	0.15%
Vanguard Russell 2000 Growth Index Trust	2023	\$72,178,361	3.95%	\$3,256,894	0.18%
	2024 YTD	\$90,330,248	4.33%	\$3,319,184	0.16%
Vanguard Russell 2000 Index Fund	2023	\$155,554,612	2.40%	\$10,006,211	0.15%
	2024 YTD	\$155,608,064	1.56%	\$11,529,726	0.12%
Vanguard Russell 2000 Value Index Fund	2023	\$20,719,232	2.14%	\$1,163,797	0.12%
	2024 YTD	\$6,373,099	0.70%	\$608,279	0.07%
Vanguard Russell 2000 Value Index Trust	2023	\$17,252,621	3.07%	\$620,375	0.11%
	2024 YTD	\$15,901,656	2.76%	\$424,574	0.07%
Vanguard S&P Small-Cap 600 Index Fund	2023	\$21,602,762	0.53%	\$669,764	0.02%
	2024 YTD	\$32,407,876	0.70%	\$1,139,125	0.02%
Vanguard S&P Small-Cap 600 Growth Index Fund	2023	\$1,615,519	0.30%	\$46,630	0.01%
	2024 YTD	\$841,971	0.10%	\$14,607	0.00%
Vanguard S&P Small-Cap 600 Value Index Fund	2023	\$9,063,206	0.69%	\$325,205	0.02%
	2024 YTD	\$13,643,925	0.97%	\$641,325	0.05%
Vanguard Small-Cap Growth Index Fund	2023	\$604,882,033	2.10%	\$45,193,301	0.16%
	2024 YTD	\$560,066,778	1.63%	\$22,927,133	0.07%
Vanguard Small-Cap Index Fund	2023	\$1,598,785,782	1.35%	\$165,861,150	0.14%
	2024 YTD	\$1,622,469,304	1.14%	\$65,524,782	0.05%
Vanguard Small-Cap Value Index Fund	2023	\$363,672,060	0.77%	\$60,848,100	0.13%
	2024 YTD	\$378,908,595	0.70%	\$16,027,387	0.03%
Vanguard Tax-Managed Small-Cap Fund	2023	\$0	0.00%	\$0	0.00%
	2024 YTD	\$0	0.00%	\$0	0.00%

Cash is currently the only acceptable form of collateral. All U.S. and international equities are marked to market daily with a minimum collateralization required equal to 102% and 105%, respectively, of the market value of the security.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.



Vanguard securities lending by fund

Figure 36.1 2023/2024 securities-lending data by fund

Sector	Year	Average market value of open loans	Average % on loan	Total period earned income	Income as % of average fund assets
Vanguard Consumer Discretionary Index Fund	2023	\$25,743,279	0.52%	\$2,012,783	0.04%
	2024 YTD	\$18,869,812	0.31%	\$1,905,088	0.03%
Vanguard Consumer Staples Index Fund	2023	\$12,571,974	0.16%	\$5,098,140	0.06%
	2024 YTD	\$6,675,294	0.08%	\$3,821,685	0.05%
Vanguard Energy Index Fund	2023	\$24,239,156	0.24%	\$328,480	0.00%
	2024 YTD	\$17,491,814	0.17%	\$537,892	0.01%
Vanguard Financials Index Fund	2023	\$26,960,922	0.30%	\$1,914,573	0.02%
	2024 YTD	\$9,548,352	0.09%	\$544,151	0.01%
Vanguard Health Care Index Fund	2023	\$37,328,070	0.19%	\$1,484,950	0.01%
	2024 YTD	\$28,054,978	0.14%	\$2,086,968	0.01%
Vanguard Industrials Index Fund	2023	\$13,663,734	0.32%	\$754,699	0.02%
	2024 YTD	\$9,647,126	0.18%	\$738,583	0.01%
Vanguard Information Technology Index Fund	2023	\$132,241,032	0.24%	\$7,378,383	0.01%
	2024 YTD	\$190,305,727	0.23%	\$6,835,492	0.01%
Vanguard Materials Index Fund	2023	\$6,905,519	0.18%	\$339,532	0.01%
	2024 YTD	\$7,638,552	0.19%	\$371,588	0.01%
Vanguard Real Estate II Index Fund	2023	\$30,652,421	0.38%	\$302,051	0.00%
	2024 YTD	\$15,557,843	0.17%	\$336,236	0.00%
Vanguard Real Estate Index Fund	2023	\$170,307,321	0.27%	\$2,137,999	0.00%
	2024 YTD	\$174,361,816	0.27%	\$2,742,008	0.00%
Vanguard Communication Services Index Fund	2023	\$21,334,986	0.70%	\$10,228,824	0.33%
	2024 YTD	\$15,039,348	0.36%	\$5,393,902	0.13%
Vanguard Utilities Index Fund	2023	\$7,603,431	0.11%	\$78,001	0.00%
	2024 YTD	\$6,440,527	0.09%	\$106,787	0.00%

Cash is currently the only acceptable form of collateral. All U.S. and international equities are marked to market daily with a minimum collateralization required equal to 102% and 105%, respectively, of the market value of the security.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.



Vanguard securities lending by fund

Figure 37.1 2023/2024 securities-lending data by fund

	Year	Average market value of open loans	Average % on loan	Total period earned income	Income as % of average fund assets
International					
Vanguard Developed Markets Index Fund	2023	\$2,241,266,061	1.38%	\$56,263,387	0.03%
	2024 YTD	\$1,613,775,626	0.85%	\$43,245,372	0.02%
Vanguard Emerging Markets Stock Index Fund	2023	\$1,301,348,487	1.33%	\$50,319,812	0.05%
	2024 YTD	\$1,081,864,974	1.02%	\$46,183,973	0.04%
Vanguard European Stock Index Fund	2023	\$96,720,439	0.42%	\$3,237,972	0.01%
	2024 YTD	\$80,811,560	0.32%	\$2,685,819	0.01%
Vanguard Fiduciary Trust Company Developed Markets Index Trust	2023	\$1,134,147	0.04%	\$48,213	0.00%
	2024 YTD	\$7,185,931	0.19%	\$291,376	0.01%
Vanguard FTSE All-World ex-US Index Fund	2023	\$492,229,175	0.98%	\$11,572,948	0.02%
	2024 YTD	\$405,643,216	0.73%	\$11,083,205	0.02%
Vanguard FTSE All-World ex-US Small-Cap Index Fund	2023	\$491,391,099	4.86%	\$18,192,160	0.18%
	2024 YTD	\$326,685,973	3.11%	\$12,925,681	0.12%
Vanguard Global ex-U.S. Real Estate Index Fund	2023	\$92,994,995	2.28%	\$4,596,763	0.11%
	2024 YTD	\$61,827,797	1.62%	\$2,747,885	0.07%
Vanguard Institutional Total International Stock Index Trust	2023	\$248,015,013	1.10%	\$6,447,012	0.03%
	2024 YTD	\$244,318,911	0.83%	\$5,691,367	0.02%
Vanguard Institutional Total International Stock Market Index Trust II	2023	\$957,371,183	0.57%	\$36,672,790	0.02%
	2024 YTD	\$941,099,717	0.45%	\$29,593,644	0.01%
Vanguard International Dividend Appreciation Index Fund	2023	\$33,849,047	0.66%	\$429,413	0.01%
	2024 YTD	\$27,509,913	0.39%	\$491,948	0.01%
Vanguard International High Dividend Yield Index Fund	2023	\$48,719,213	0.76%	\$1,175,933	0.02%
	2024 YTD	\$63,899,950	0.80%	\$1,742,539	0.02%
Vanguard Pacific Stock Index Fund	2023	\$150,315,364	1.67%	\$4,630,359	0.05%
	2024 YTD	\$76,146,013	0.76%	\$2,373,674	0.02%
Vanguard Total International Stock Index Fund	2023	\$5,257,853,479	1.42%	\$137,659,017	0.04%
	2024 YTD	\$4,370,218,756	1.02%	\$127,096,382	0.03%
Vanguard Total World Stock Index Fund	2023	\$236,448,663	0.64%	\$9,620,693	0.03%
	2024 YTD	\$175,469,693	0.36%	\$6,351,615	0.01%

Cash is currently the only acceptable form of collateral. All U.S. and international equities are marked to market daily with a minimum collateralization required equal to 102% and 105%, respectively, of the market value of the security.

Source: Vanguard. All data as of December 31, 2024, unless otherwise noted.



Benchmark methodologies

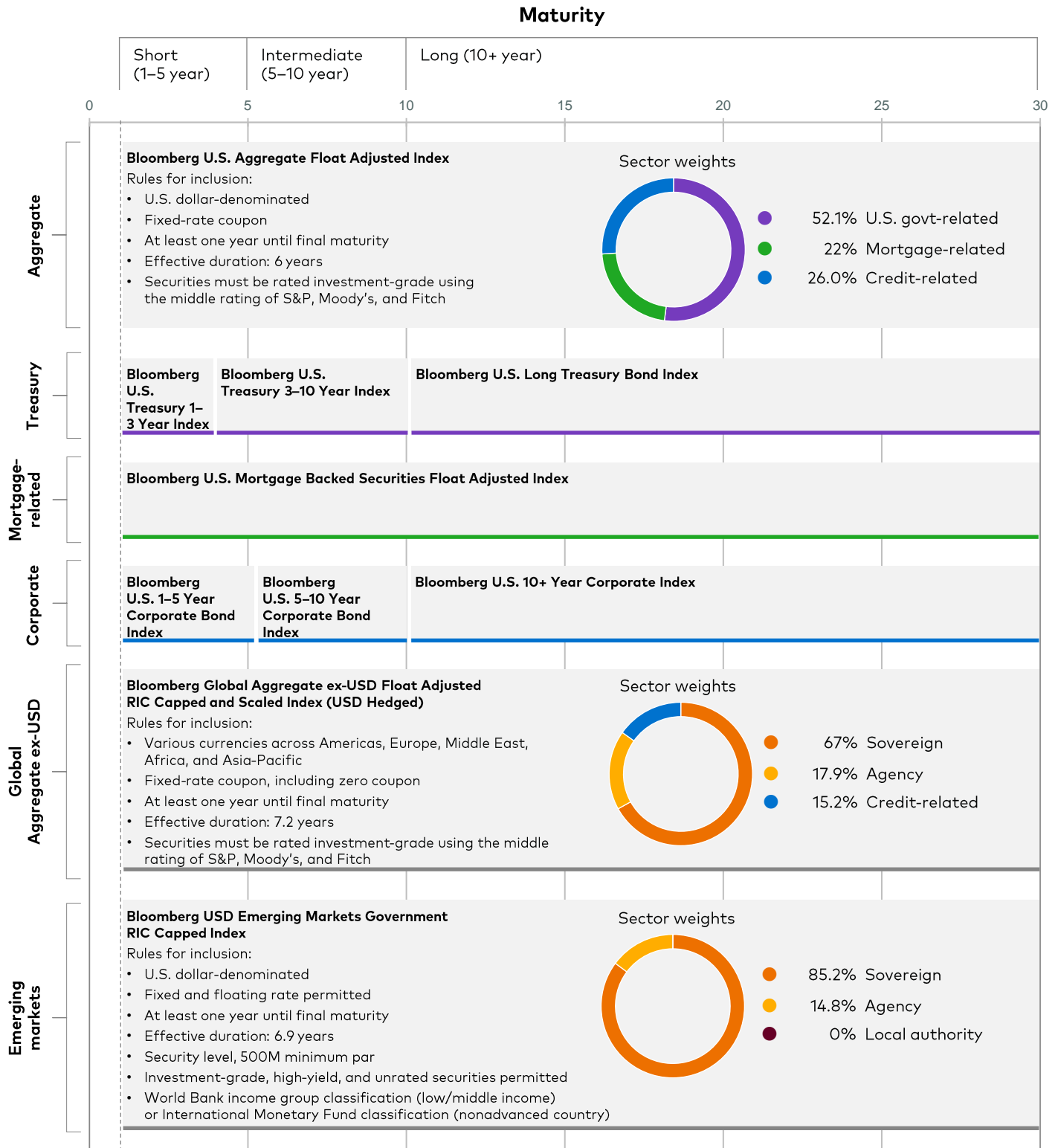
IN THIS SECTION:
Fixed income
Equity



Benchmark methodologies overview

A review of U.S. and non-U.S. fixed income benchmarks

Figure 39.1 Fixed income benchmark composition



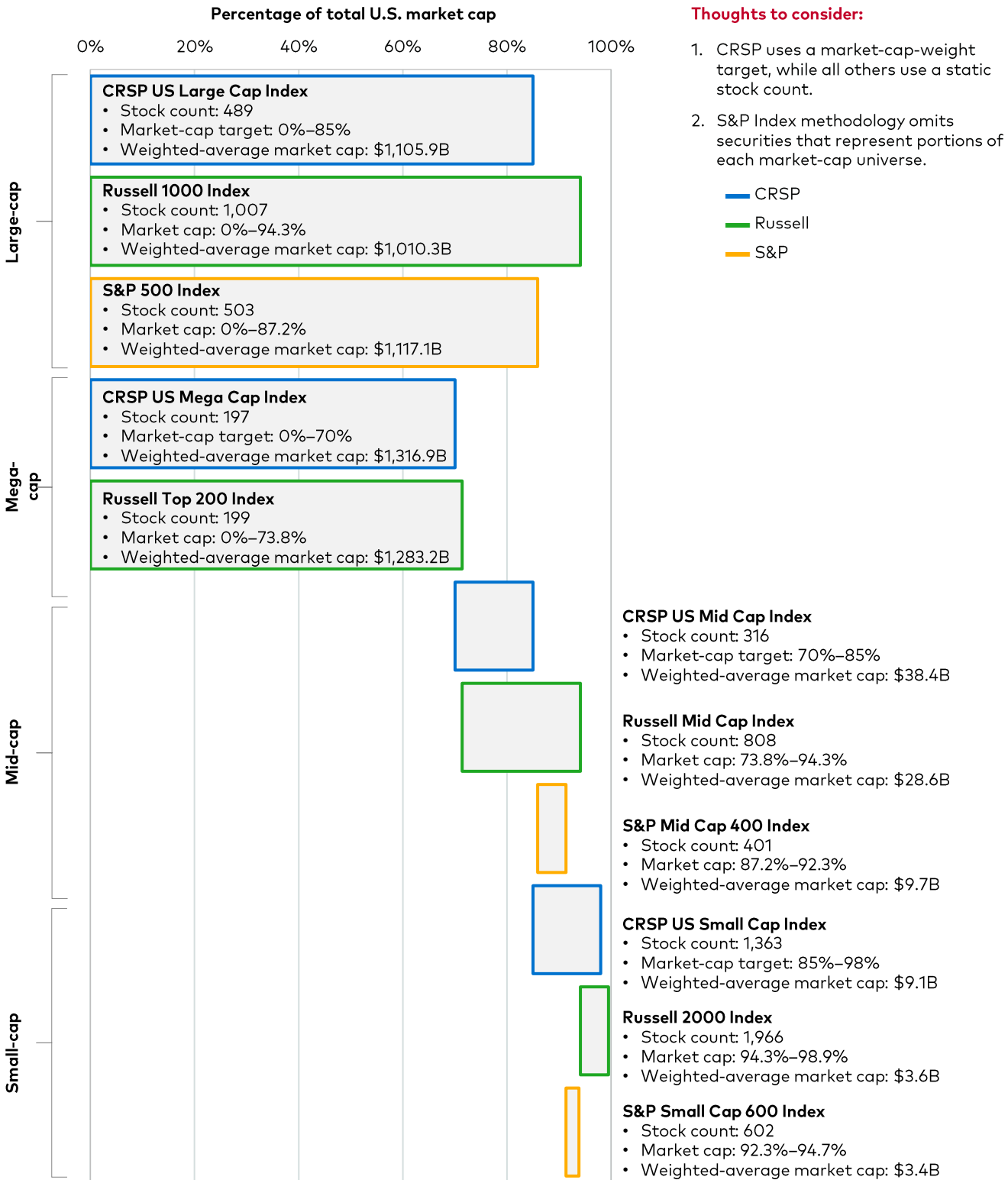
Numbers may not add to 100% due to rounding. All index characteristics data as of December 31, 2024.



Benchmark methodologies overview

Performance differences between indexes are caused by differences in construction methodology. Among the most impactful elements are exposures to market capitalization segments and regional markets, which are depicted by the charts below and on the following page.

Figure 40.1 U.S. equity benchmark methodology comparison

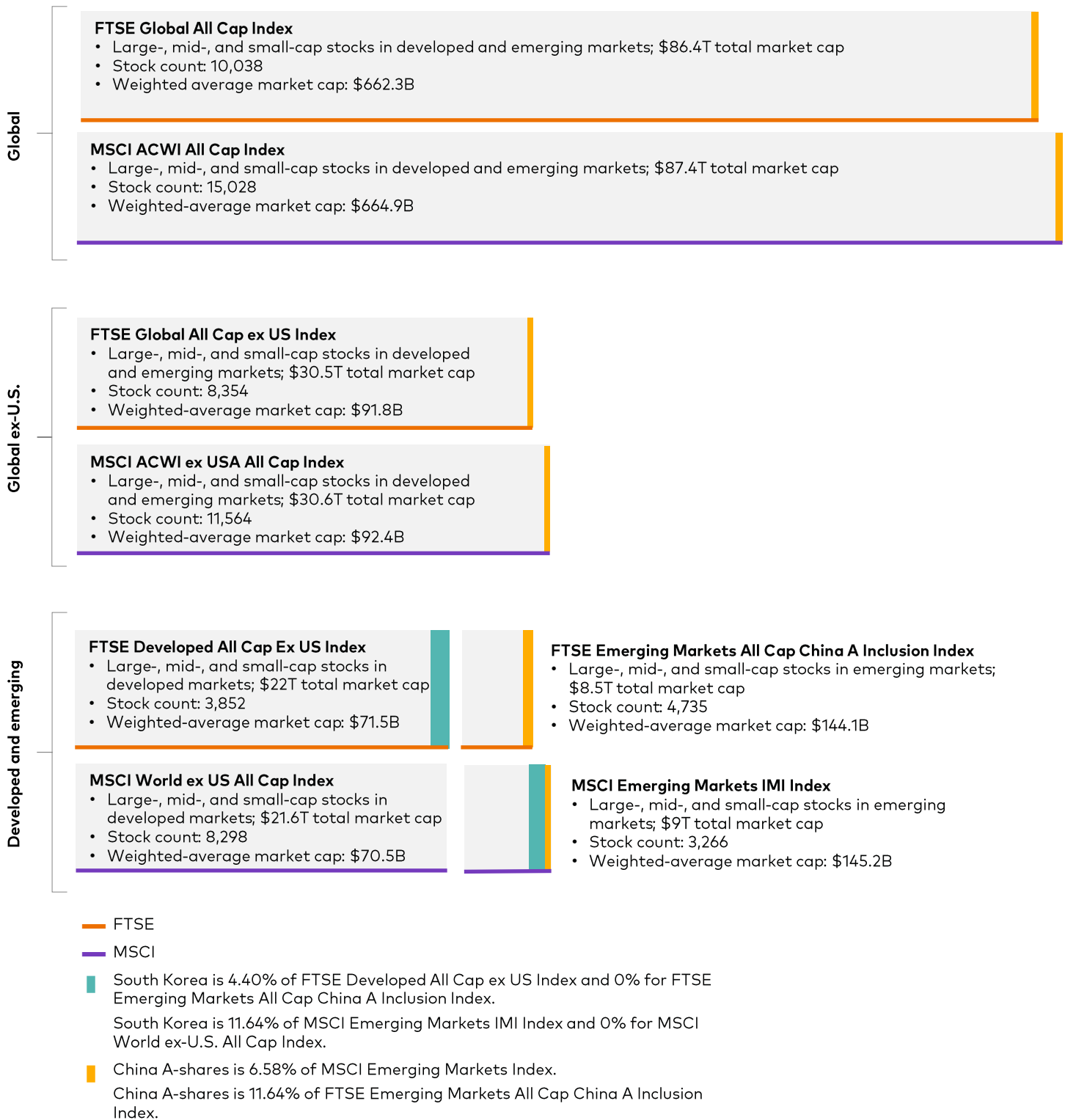


CRSP is shown as a targeted market cap, while the others are shown as a percentage of the S&P Total Stock Market. All index characteristics data as of December 31, 2024.



Benchmark methodologies overview

Figure 41.1 Global equity benchmark methodology comparison



All index characteristics data as of December 31, 2024.

Notes

Notes

For more information about Vanguard funds, visit institutional.vanguard.com or call 800-523-1036 to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information about a fund are contained in the prospectus; read and consider it carefully before investing.

Vanguard ETFs® are not redeemable with the issuing fund other than in very large aggregations worth millions of dollars. Instead, investors must buy or sell Vanguard ETFs in the secondary market and hold those 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.

All investments are subject to risk, including the possible loss of the money you invest. 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. Foreign investing involves additional risks, including currency fluctuations and political uncertainty. Stocks and bonds of companies in emerging markets are generally more risky than those of companies in developed countries. Diversification does not ensure a profit or protect against a loss. 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.

The Vanguard collective trusts are not mutual funds. They are collective trusts available only to tax-qualified plans and their eligible participants. The collective trust mandates are managed by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group, Inc. Investment objectives, risks, charges, expenses, and other important information should be considered carefully before investing.

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