

Vanguard Index Funds

Quarterly Review | September 30, 2024



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Executive summary

Falling interest rates lift stocks and bonds

The long-awaited easing cycle began in September, with the U.S. Federal Reserve cutting its policy rate by half a percent. Despite stocks seeing large declines in August in response to weaker economic data, most major asset classes, domestic and international, ended the quarter with strong returns. As global inflation has continued to cool, other central banks, including the European Central Bank and the Bank of England, also cut rates during the quarter. The focus of central banks has begun to shift away from inflation toward protecting the economy from weakening.

In the U.S., all equity sectors were positive for the third quarter apart from energy. Utilities and the interest rate sensitive real estate sector were the top performers. Among the worst performing sectors were technology and communication services, a reversal from one quarter ago. Small- and mid-cap stocks, typically more sensitive to interest rates, outpaced large-cap stocks. Non-U.S. equities outperformed the U.S., in part due to Shanghai's stock market rally fueled by a new round of stimulus from the Chinese government.

Global fixed income rallied with lower interest rates. Unhedged international fixed income performed better than U.S. due in part to strength in Asia. Investment grade and high-yield spreads both tightened modestly over the quarter leading to strong performance within credit.

Despite market volatility, Vanguard has strived 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 cost, and staying disciplined with a long-term perspective.

Performance of key Vanguard index funds

Fund name (inception date)	4Q 2023	1Q 2024	2Q 2024	3Q 2024	1-year
Vanguard Total Stock Market Index Fund (07/07/1997)	12.17%	10.00%	3.25%	6.17%	35.26%
Vanguard Total International Stock Index Fund (11/29/2010)	9.98%	4.32%	0.80%	8.03%	24.92%
Vanguard Total Bond Market Index Fund (09/18/1995)	6.69%	-0.79%	0.18%	5.07%	11.42%
Vanguard Total International Bond Index Fund (05/31/2013)	6.54%	0.10%	-0.58%	4.12%	10.39%
Vanguard Short-Term Inflation-Protected Securities Index Fund (10/17/2012)	2.55%	0.85%	1.43%	2.50%	7.53%

Source of performance figures: Vanguard, Institutional share class, as of September 30, 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 (%)

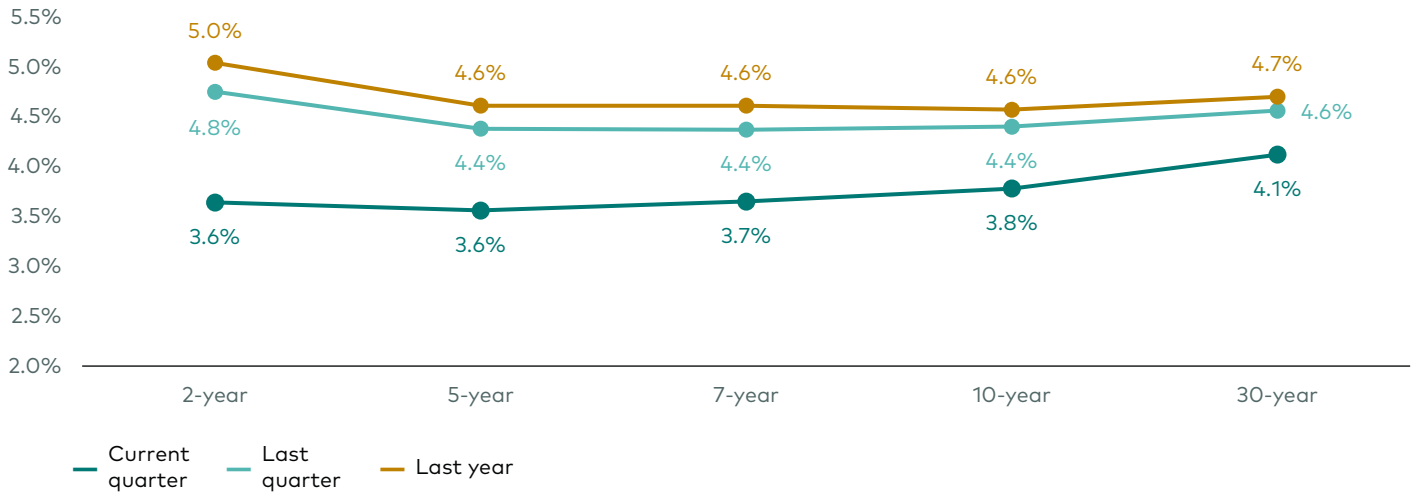
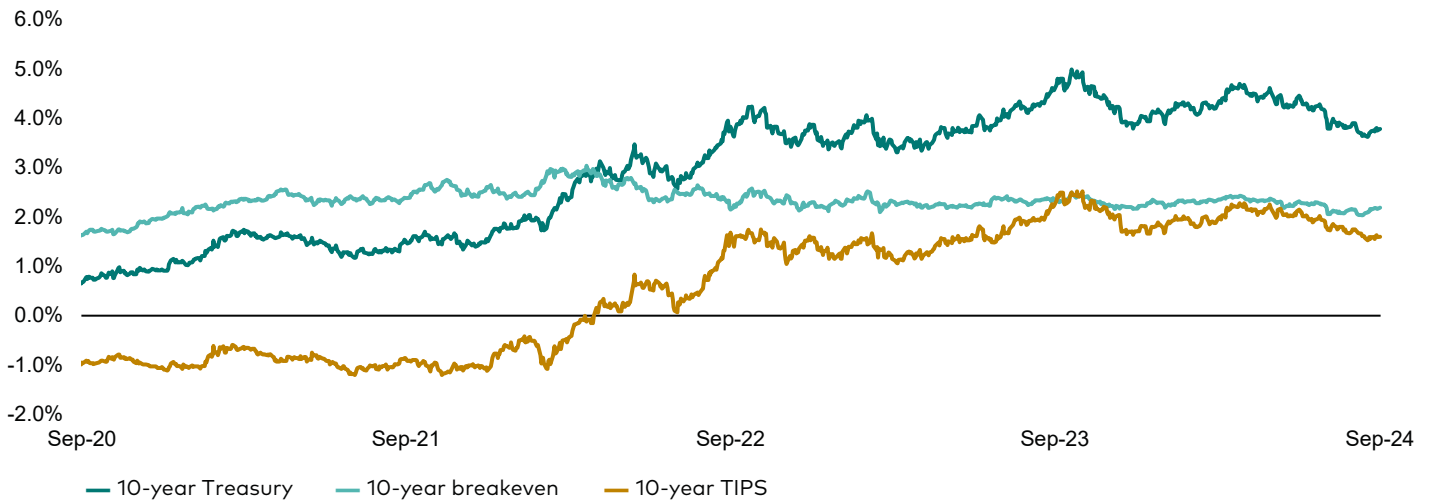


Figure 5.2 Inflation expectations*



Source: Vanguard. All data as of September 30, 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)

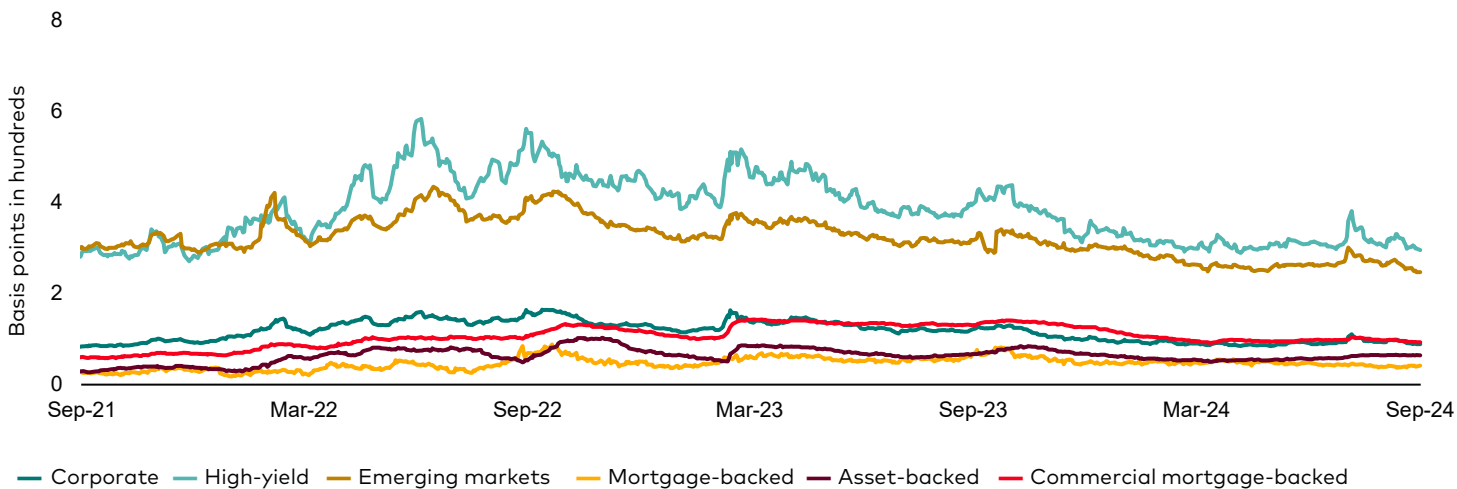
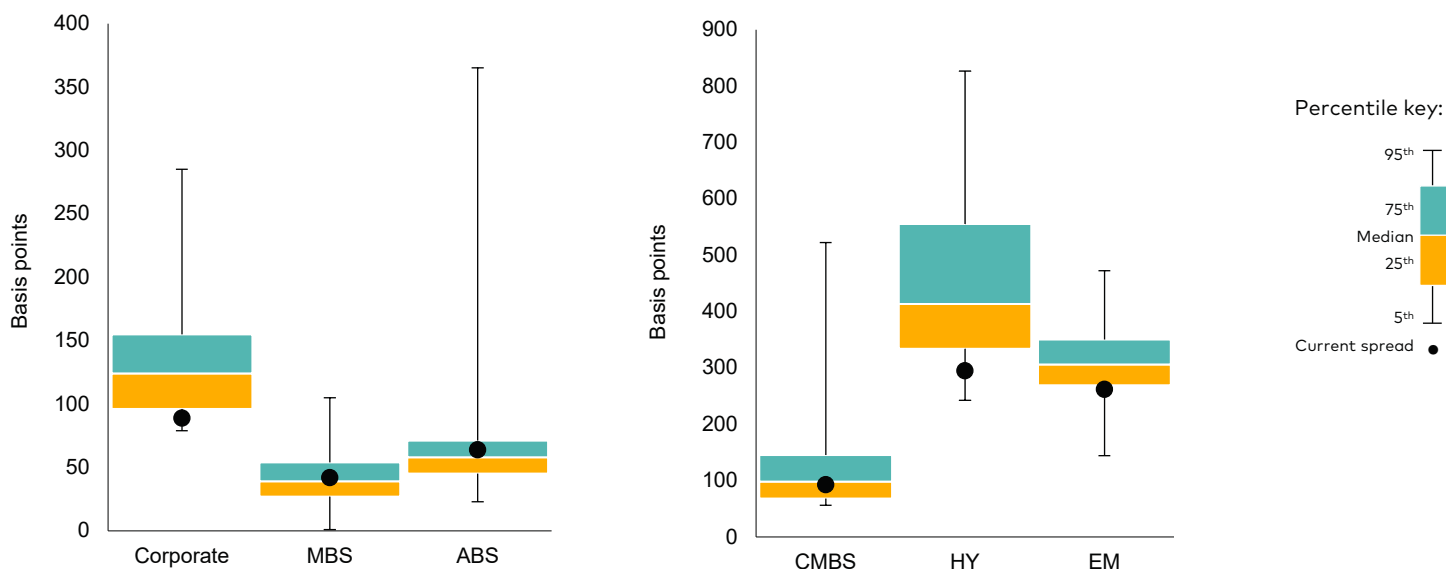


Figure 6.2 Credit spreads relative to comparable Treasuries over 20 years



Sources: Vanguard and Bloomberg. All data as of September 30, 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

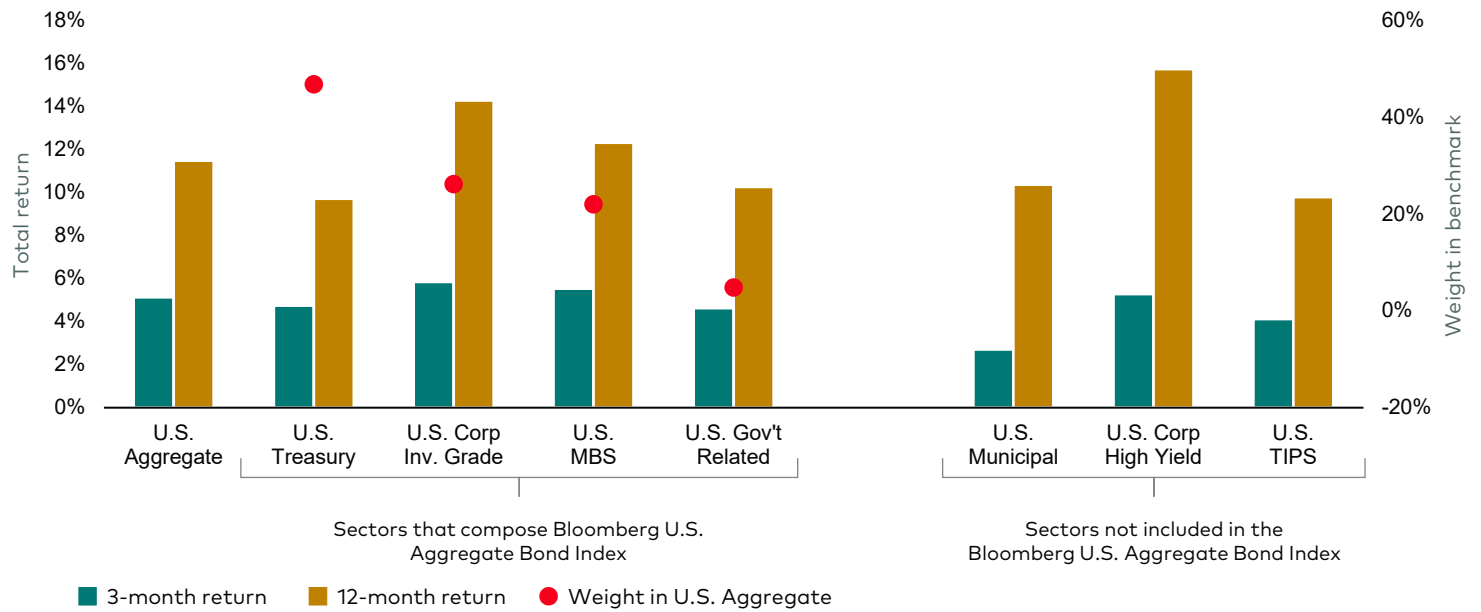
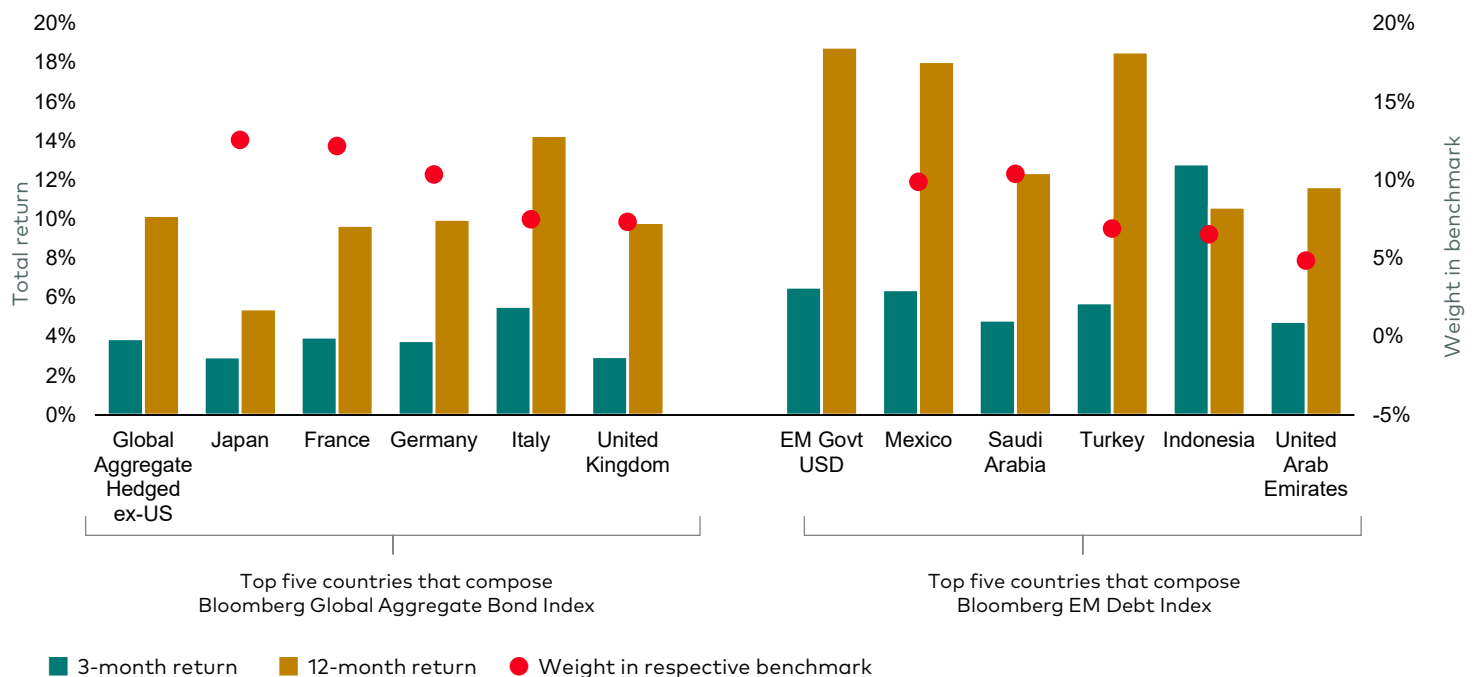


Figure 7.2 Developed and emerging markets total return by country



Sources: Vanguard and Bloomberg. All data as of September 30, 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	5.07	11.42	-1.42	0.32	1.83	4.32	9/18/1995
Total Bond Market II Index Fund (VTBNX)	0.020	5.14	11.47	-1.39	0.27	1.80	2.78	2/17/2009
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	0.050	5.34	12.23	-1.13	0.03	1.33	1.50	10/31/2013
Vanguard Total Corporate Bond ETF (VTC)	0.040	—	—	—	—	—	—	—
Market price		5.93	14.35	-1.13	1.03	—	2.27	11/7/2017
NAV		5.95	14.34	-1.13	1.03	—	2.27	11/7/2017
Short-term								
Vanguard Short-Term Bond Index Fund (VBITX)	0.050	3.48	8.08	0.92	1.50	1.73	1.61	9/27/2011
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	0.040	2.50	7.53	2.54	3.56	2.40	1.94	10/17/2012
Vanguard Short-Term Treasury Index Fund (VSBIX)	0.050	2.90	6.74	1.23	1.44	1.36	1.15	8/23/2010
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	0.050	3.76	9.69	1.57	2.17	2.44	2.80	11/19/2009
Intermediate-term								
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	0.050	5.63	12.33	-1.25	0.72	2.33	4.04	1/26/2006
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	0.050	4.74	9.45	-1.14	0.31	1.55	2.24	3/19/2010
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	0.050	5.89	15.01	-0.38	1.62	3.17	4.38	11/19/2009
<i>Fund Purchase Transaction Fee: 0.25</i>								
Long-term								
Vanguard Long-Term Bond Index Fund (VBLLX)	0.050	7.93	17.23	-6.17	-1.95	2.33	4.67	2/2/2006
<i>Fund Purchase Transaction Fee: 0.50</i>								
Vanguard Long-Term Treasury Index Fund (VLGIX)	0.050	7.80	15.36	-8.40	-4.35	1.04	2.63	7/30/2010
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	0.050	8.23	19.15	-4.39	-0.38	3.22	5.09	11/19/2009
<i>Fund Purchase Transaction Fee: 1.00</i>								
Vanguard Extended Duration Treasury Index Fund (VEDTX)	0.060	10.14	18.56	-13.70	-7.66	0.39	3.57	11/28/2007
<i>Fund Purchase Transaction Fee: 0.50</i>								
International/Global								
Vanguard Total International Bond Index Fund (VTIFX)	0.070	4.12	10.39	-0.65	-0.15	2.19	2.47	5/31/2013
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	0.180	6.49	18.60	-0.19	1.08	—	3.41	2/11/2015
<i>Fund Purchase Transaction Fee: 0.75</i>								
Vanguard Total World Bond ETF (BNDW)	0.050	—	—	—	—	—	—	—
Market price		4.66	10.94	-0.99	0.10	—	1.74	9/4/2018
NAV		4.59	10.89	-1.00	0.09	—	1.73	9/4/2018

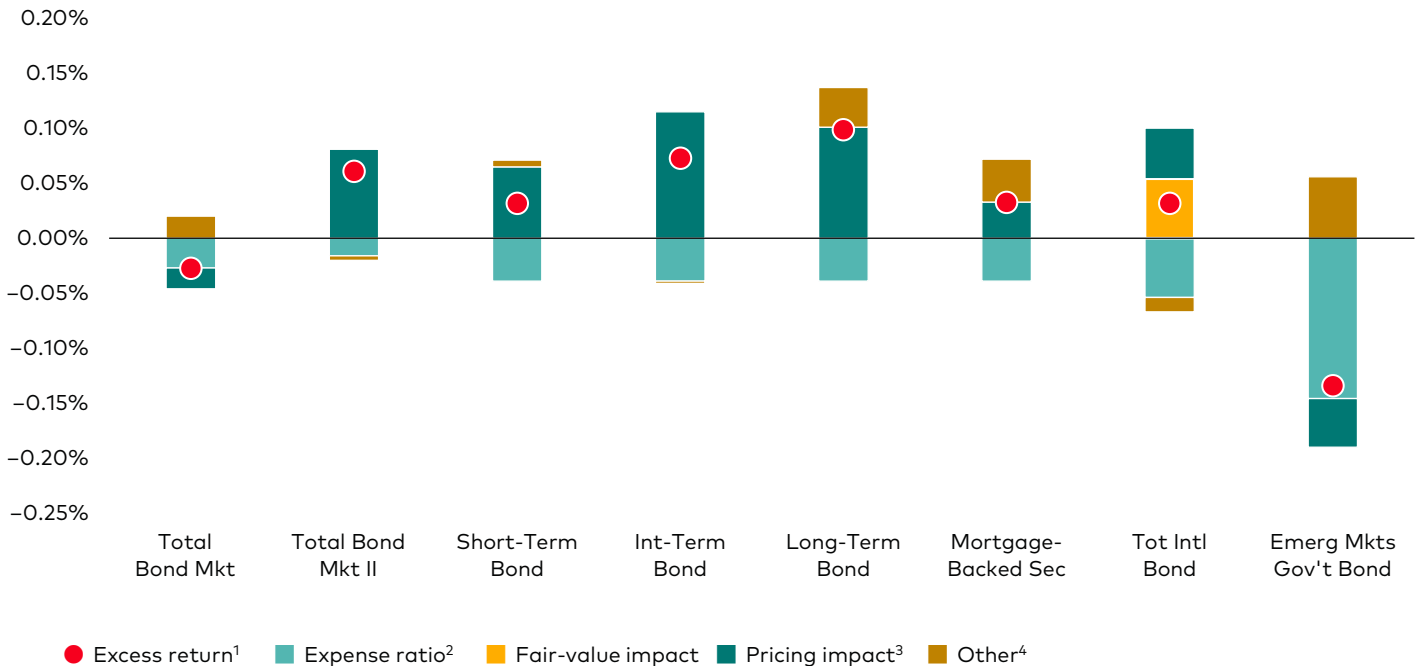
Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Total Bond Market Index Fund (VBTIX)	4.452	-0.027	0.000	-0.019	0.020	4.425	-0.027
Total Bond Market II Index Fund (VTBNX)	4.452	-0.016	0.000	0.081	-0.004	4.513	0.061
Vanguard Short-Term Bond Index Fund (VBITX)	4.501	-0.039	0.000	0.065	0.006	4.533	0.032
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	5.029	-0.039	0.000	0.115	-0.002	5.102	0.073
Vanguard Long-Term Bond Index Fund (VBLLX)	3.535	-0.039	0.000	0.101	0.036	3.634	0.099
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	4.520	-0.039	0.000	0.033	0.039	4.553	0.033
Vanguard Total International Bond Index Fund (VTIFX)	3.583	-0.054	0.054	0.046	-0.013	3.615	0.032
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	8.196	-0.146	-0.000	-0.044	0.056	8.062	-0.134

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

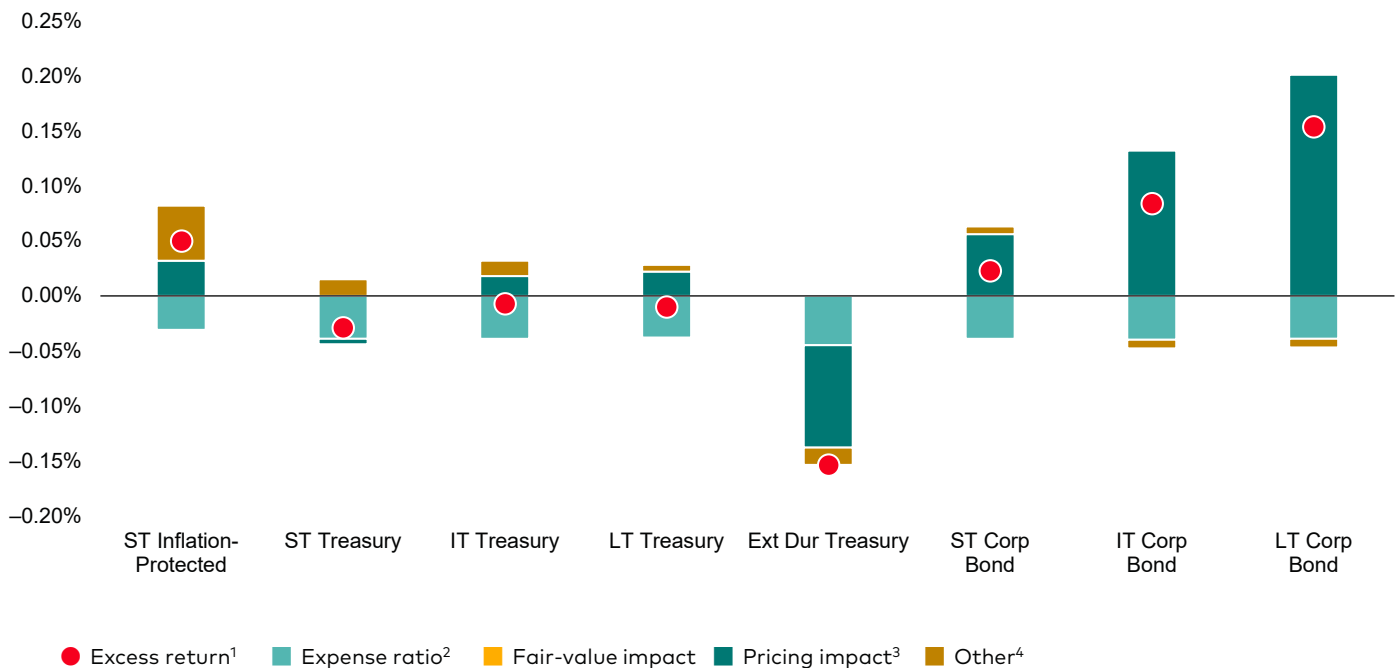
⁴ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	4.804	-0.031	0.000	0.032	0.050	4.855	0.050
Vanguard Short-Term Treasury Index Fund (VSBIX)	4.128	-0.039	0.000	-0.005	0.015	4.099	-0.029
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	4.241	-0.039	0.000	0.018	0.014	4.234	-0.007
Vanguard Long-Term Treasury Index Fund (VLGIX)	2.417	-0.038	0.000	0.022	0.006	2.406	-0.010
Vanguard Extended Duration Treasury Index Fund (VEDTX)	0.021	-0.045	0.000	-0.093	-0.016	-0.133	-0.154
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	5.367	-0.039	0.000	0.056	0.007	5.390	0.023
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	6.083	-0.040	0.000	0.132	-0.008	6.167	0.084
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	4.535	-0.039	0.000	0.201	-0.008	4.688	0.154

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

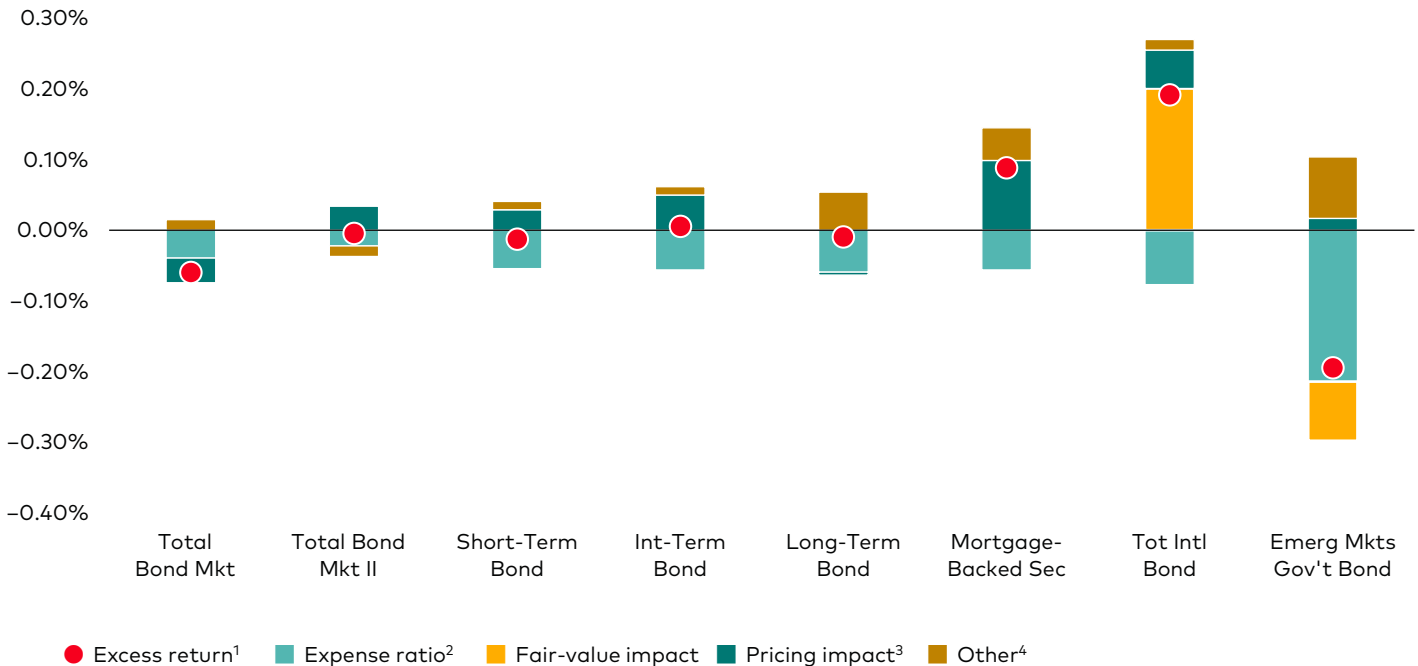
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Attribution for all Vanguard taxable fixed income index funds

Figure 11.1 One-year excess return performance attribution as of September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Total Bond Market Index Fund (VBTIX)	11.474	-0.039	0.000	-0.035	0.015	11.415	-0.059
Total Bond Market II Index Fund (VTBNX)	11.474	-0.022	0.000	0.034	-0.015	11.471	-0.004
Vanguard Short-Term Bond Index Fund (VBITX)	8.097	-0.054	0.000	0.029	0.012	8.085	-0.012
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	12.322	-0.056	0.000	0.050	0.012	12.327	0.006
Vanguard Long-Term Bond Index Fund (VBLLX)	17.240	-0.059	0.000	-0.004	0.054	17.231	-0.009
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	12.141	-0.056	0.000	0.099	0.046	12.230	0.089
Vanguard Total International Bond Index Fund (VTIFX)	10.194	-0.077	0.201	0.054	0.015	10.387	0.192
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	18.791	-0.214	-0.084	0.017	0.087	18.597	-0.194

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

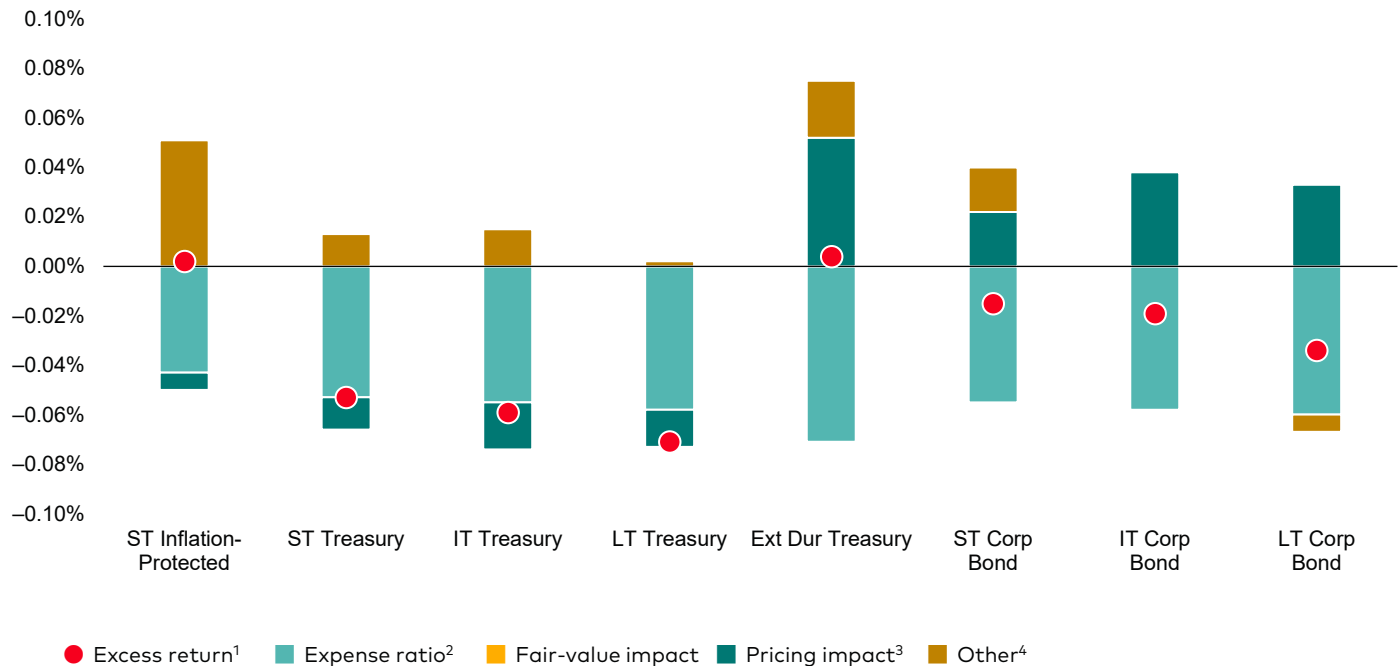
⁴ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	7.526	-0.043	0.000	-0.007	0.051	7.528	0.002
Vanguard Short-Term Treasury Index Fund (VSBIX)	6.790	-0.053	0.000	-0.013	0.013	6.737	-0.053
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	9.504	-0.055	0.000	-0.019	0.015	9.445	-0.059
Vanguard Long-Term Treasury Index Fund (VLGIX)	15.426	-0.058	0.000	-0.015	0.002	15.355	-0.071
Vanguard Extended Duration Treasury Index Fund (VEDTX)	18.556	-0.071	0.000	0.052	0.023	18.561	0.004
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	9.704	-0.055	0.000	0.022	0.018	9.689	-0.015
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	15.032	-0.058	0.000	0.038	-0.000	15.013	-0.019
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	19.183	-0.060	0.000	0.033	-0.007	19.149	-0.034

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

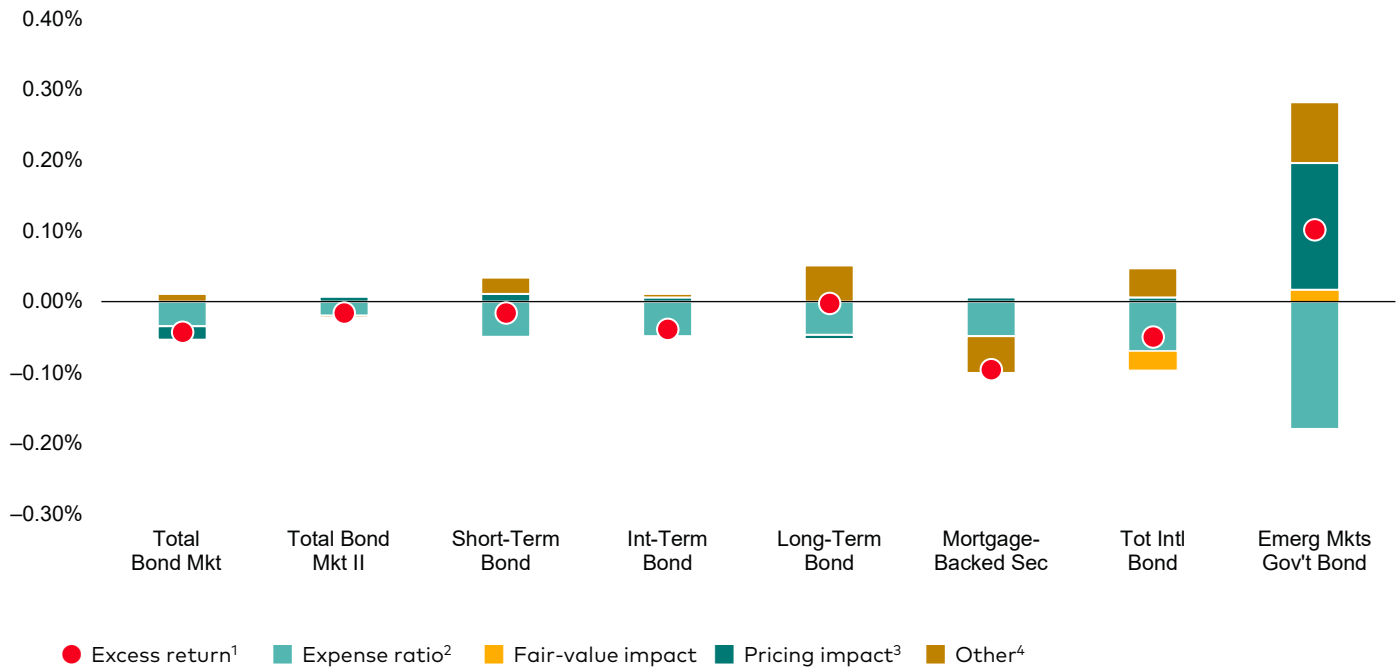
⁴ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Total Bond Market Index Fund (VBTIX)	-1.376	-0.035	0.000	-0.019	0.011	-1.420	-0.043
Total Bond Market II Index Fund (VTBNX)	-1.376	-0.020	0.000	0.007	-0.003	-1.392	-0.016
Vanguard Short-Term Bond Index Fund (VBITX)	0.937	-0.050	0.000	0.011	0.023	0.921	-0.016
Vanguard Intermediate-Term Bond Index Fund (VBIMX)	-1.208	-0.049	0.000	0.006	0.005	-1.247	-0.039
Vanguard Long-Term Bond Index Fund (VBLIX)	-6.169	-0.047	0.000	-0.006	0.051	-6.171	-0.002
Vanguard Mortgage-Backed Securities Index Fund (VMBIX)	-1.039	-0.049	0.000	0.006	-0.052	-1.135	-0.096
Vanguard Total International Bond Index Fund (VTIFX)	-0.603	-0.070	-0.027	0.006	0.041	-0.653	-0.050
Vanguard Emerging Markets Government Bond Index Fund (VGIVX)	-0.290	-0.180	0.017	0.179	0.086	-0.187	0.102

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

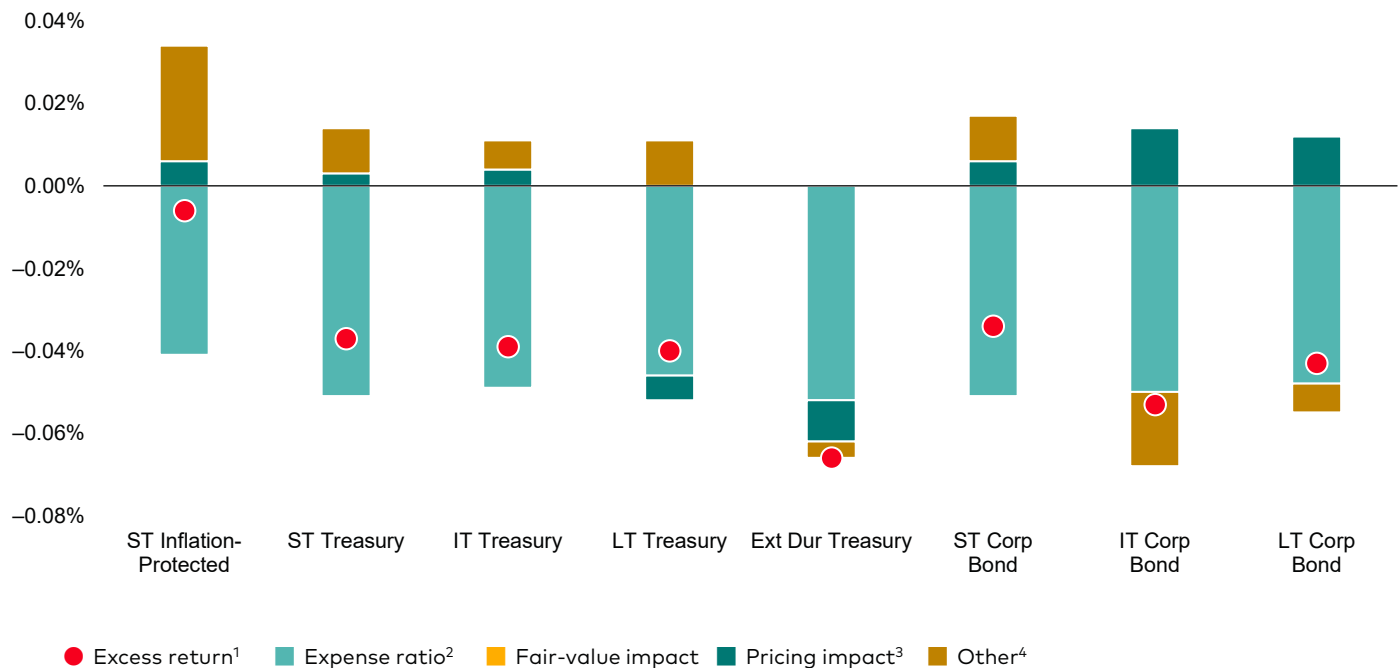
⁴ Other category may include performance impacts from the following sources: portfolio manager investment decisions, trading impact, and tax withholding differences (funds with international investments only).

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Pricing impact ³	Other ⁴	Fund return	Excess return ¹
Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX)	2.547	-0.041	0.000	0.006	0.028	2.541	-0.006
Vanguard Short-Term Treasury Index Fund (VSBIX)	1.268	-0.051	0.000	0.003	0.011	1.231	-0.037
Vanguard Intermediate-Term Treasury Index Fund (VIIGX)	-1.106	-0.049	0.000	0.004	0.007	-1.144	-0.039
Vanguard Long-Term Treasury Index Fund (VLGIX)	-8.355	-0.046	0.000	-0.006	0.011	-8.395	-0.040
Vanguard Extended Duration Treasury Index Fund (VEDTX)	-13.631	-0.052	0.000	-0.010	-0.004	-13.697	-0.066
Vanguard Short-Term Corporate Bond Index Fund (VSTBX)	1.606	-0.051	0.000	0.006	0.011	1.572	-0.034
Vanguard Intermediate-Term Corporate Bond Index Fund (VICBX)	-0.329	-0.050	0.000	0.014	-0.018	-0.382	-0.053
Vanguard Long-Term Corporate Bond Index Fund (VLCIX)	-4.348	-0.048	0.000	0.012	-0.007	-4.390	-0.043

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ Pricing impact includes differences in external pricing vendor inputs.

⁴ 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).

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

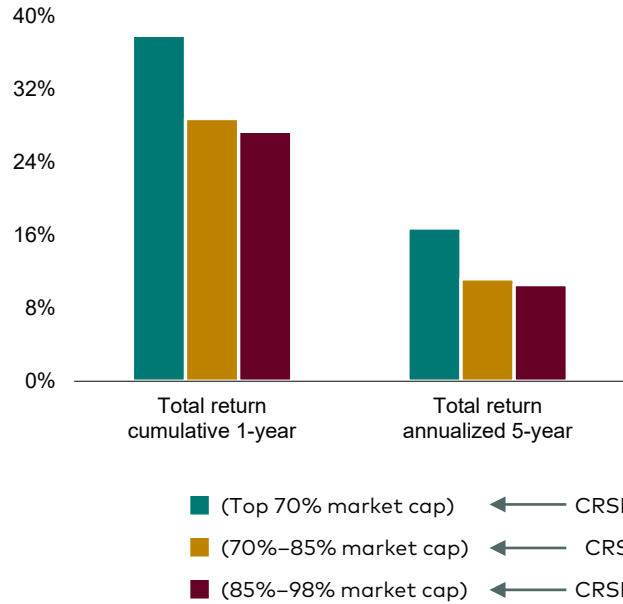


Figure 16.2 U.S. style returns

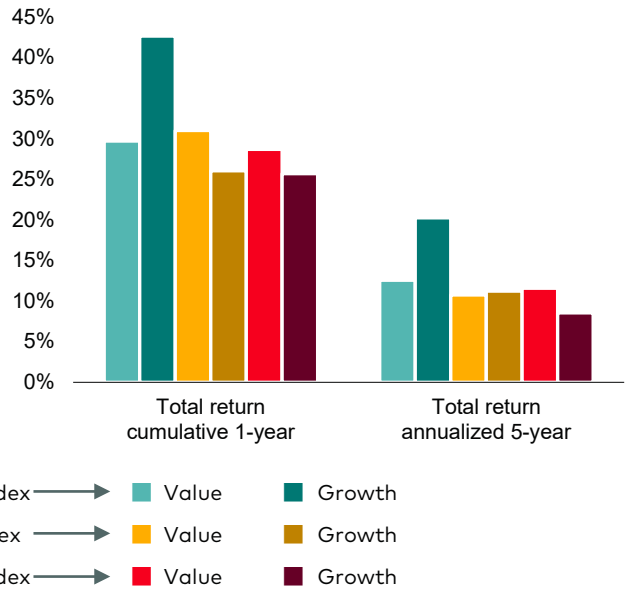
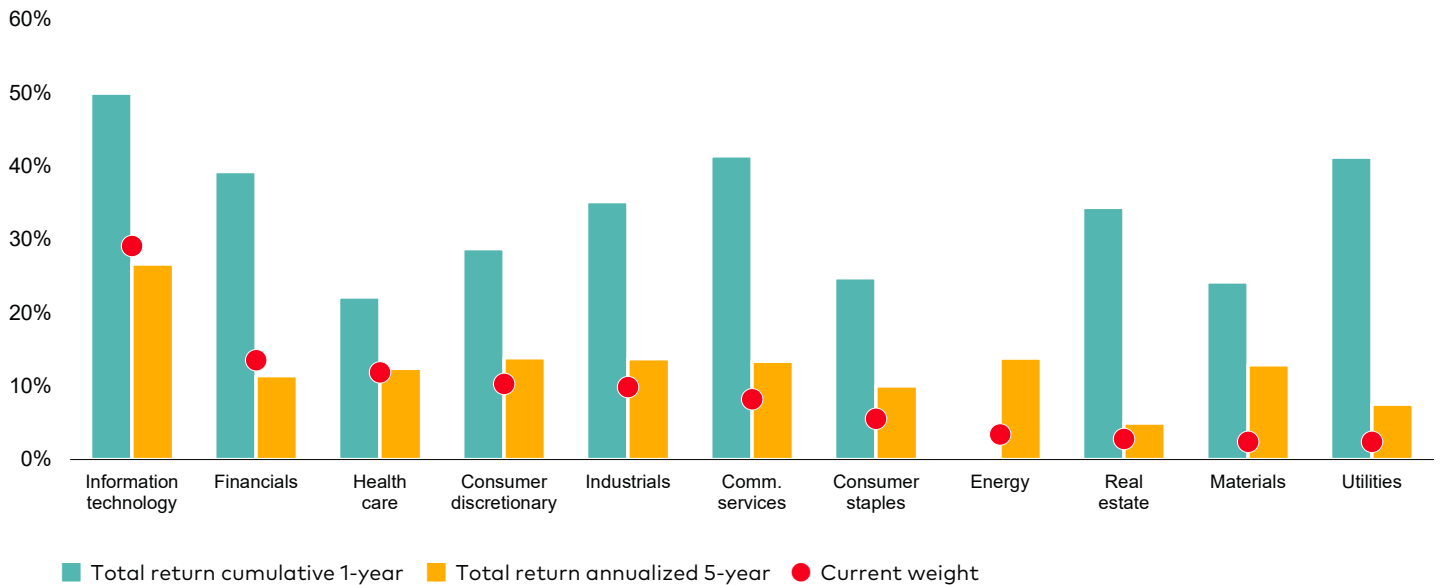


Figure 16.3 CRSP Total Stock Market: Sector exposures and returns



Source: Vanguard. All data as of September 30, 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

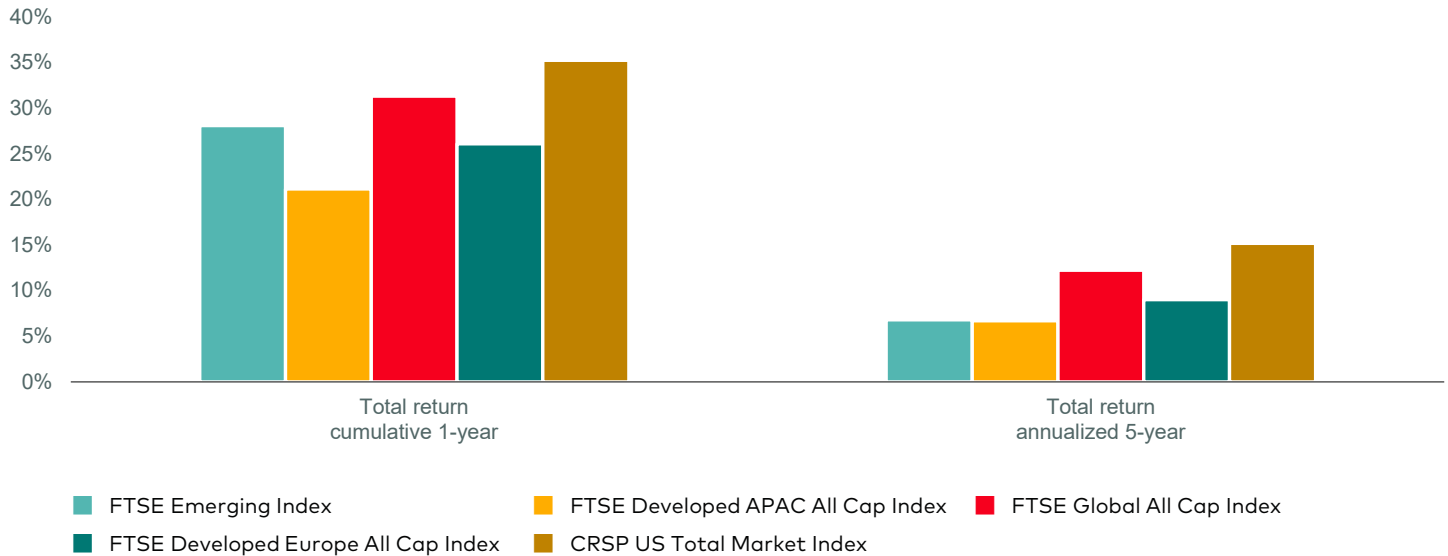


Figure 17.2 FTSE All Cap Developed ex-U.S.: Largest markets and returns¹

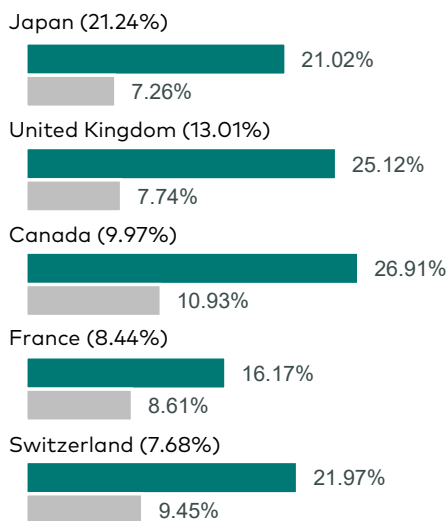
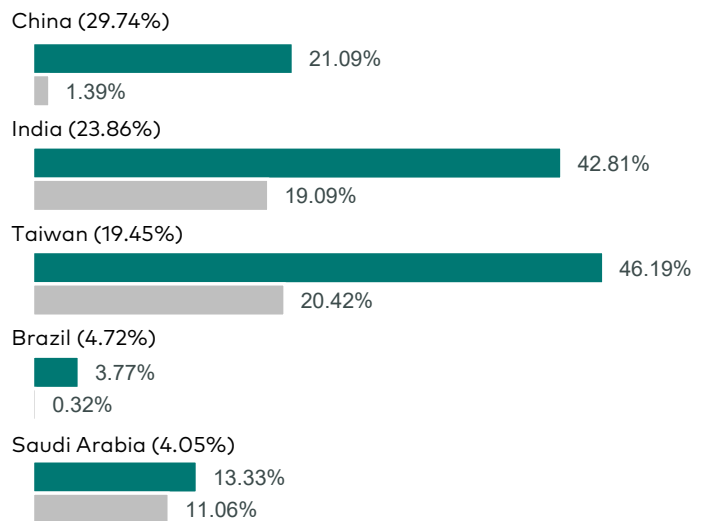


Figure 17.3 FTSE All Cap Emerging: Largest markets and returns¹



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

Source: FactSet. All data as of September 30, 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	6.17	35.26	10.11	15.19	12.78	9.10	7/7/1997
Vanguard Mega Cap Index Fnd (VMCTX)	0.06	5.07	37.88	12.27	16.78	13.86	11.57	2/22/2008
Vanguard Institutional Index Fnd (VINIX)	0.04	5.88	36.30	11.87	15.95	13.35	10.71	7/31/1990
Vanguard Extended Market Index Fnd (VIEIX)	0.05	8.09	28.57	1.22	10.77	9.65	8.91	7/7/1997
Vanguard Large-Cap Index Fnd (VLISX)	0.04	5.77	36.36	11.09	15.86	13.25	10.77	6/30/2005
Vanguard Mid-Cap Index Fnd (VMCIX)	0.04	9.36	28.81	5.31	11.23	10.22	10.09	5/21/1998
Vanguard Small-Cap Index Fnd (VSCIX)	0.04	9.04	27.45	4.37	10.67	9.65	9.09	7/7/1997
Vanguard Developed Markets Index Fnd (VTMNX)	0.06	7.49	24.71	4.84	8.30	5.94	5.03	1/4/2001
Vanguard Emerging Markets Stock Index Fnd (VEMIX)	0.10	9.29	24.99	1.63	6.42	4.21	6.87	6/22/2000
Vanguard Total International Stock Index Fnd (VTSNX)	0.09	8.03	24.92	4.03	7.77	5.45	5.59	11/29/2010

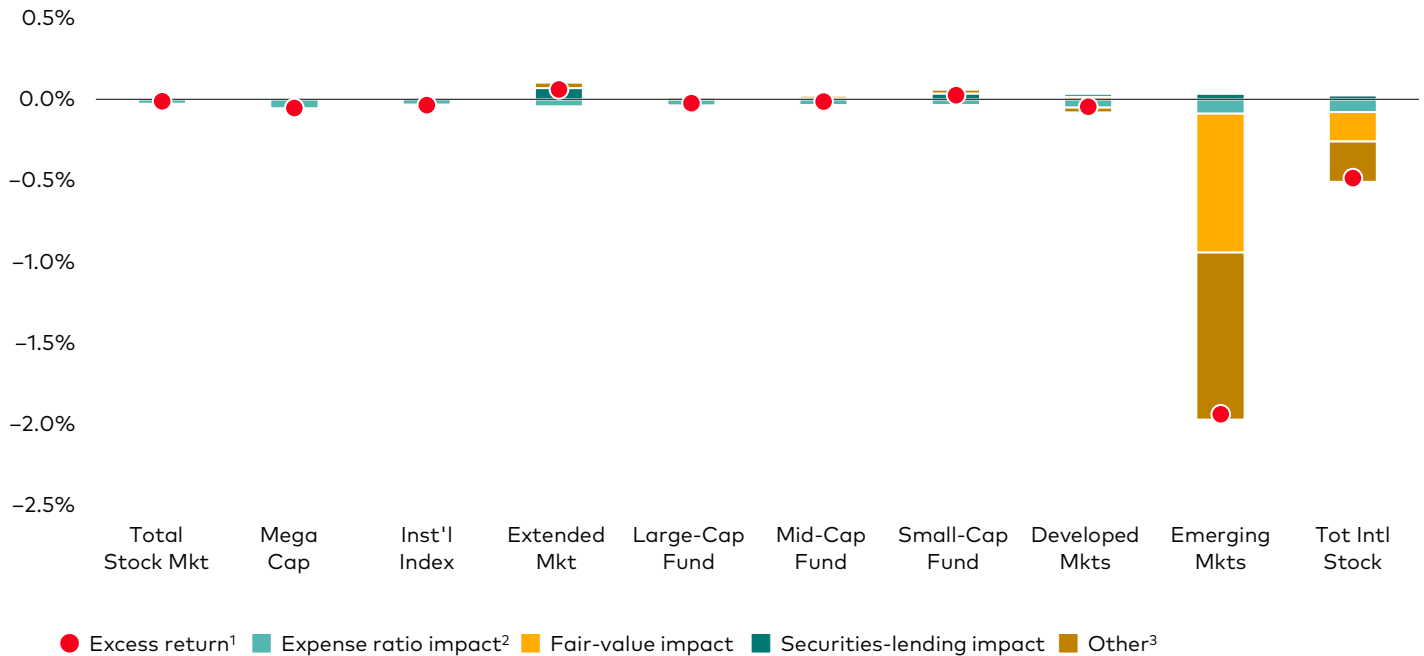
Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Securities-lending impact	Other ³	Fund return	Excess return ¹
Vanguard Total Stock Market Index Fund (VITMX)	20.595	-0.027	0.000	0.009	0.007	20.584	-0.011
Vanguard Mega Cap Index Fund (VMCTX)	23.271	-0.055	0.000	0.000	0.002	23.218	-0.053
Vanguard Institutional Index Fund (VINIX)	22.079	-0.032	0.000	0.000	-0.002	22.045	-0.034
Vanguard Extended Market Index Fund (VIEIX)	11.613	-0.042	0.000	0.070	0.033	11.674	0.061
Vanguard Large-Cap Index Fund (VLISX)	21.801	-0.036	0.000	0.001	0.013	21.779	-0.022
Vanguard Mid-Cap Index Fund (VMCIX)	14.728	-0.034	0.000	0.007	0.015	14.715	-0.012
Vanguard Small-Cap Index Fund (VSCIX)	12.348	-0.034	0.000	0.037	0.022	12.374	0.026
Vanguard Developed Markets Index Fund (VTMNX)	12.212	-0.050	0.016	0.018	-0.029	12.167	-0.045
Vanguard Emerging Markets Stock Index Fund (VEMIX)	19.218	-0.088	-0.854	0.034	-1.029	17.281	-1.937
Vanguard Total International Stock Index Fund (VTSNX)	14.070	-0.077	-0.182	0.024	-0.249	13.586	-0.483

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

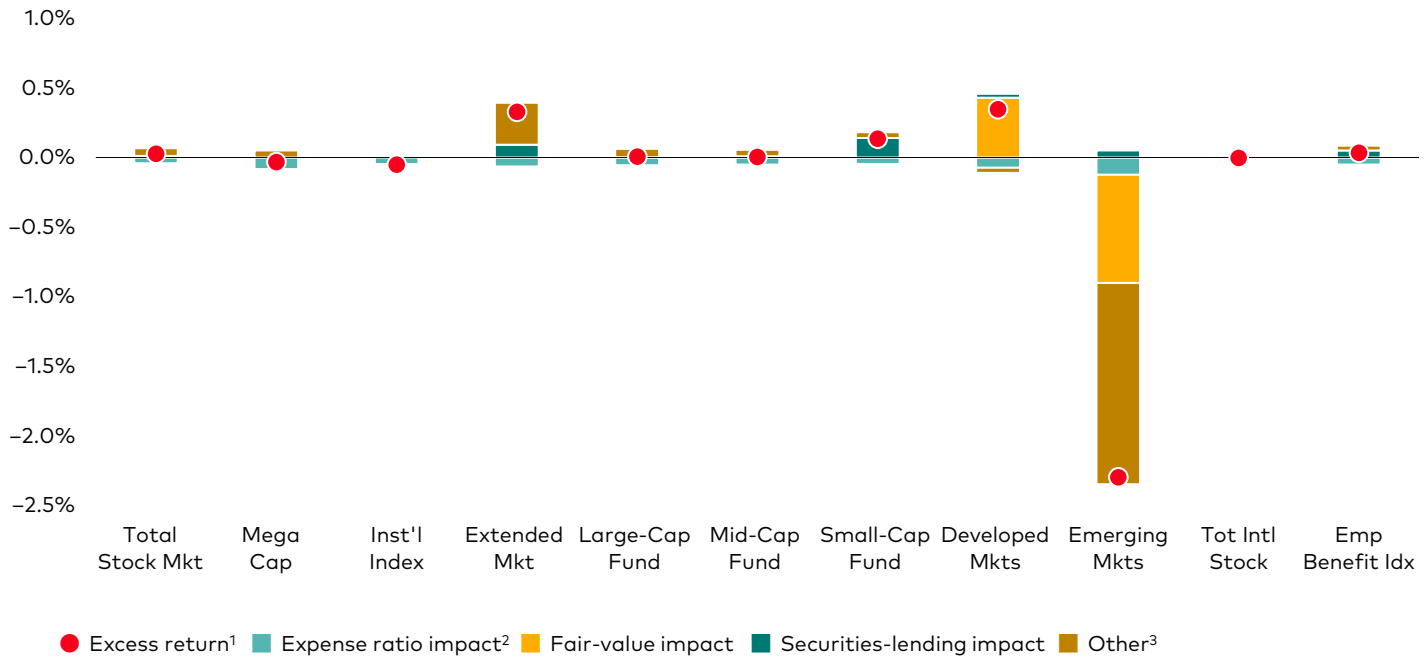
³ Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Securities-lending impact	Other ³	Fund return	Excess return ¹
Vanguard Total Stock Market Index Fund (VITMX)	35.232	-0.041	0.000	0.012	0.055	35.258	0.026
Vanguard Mega Cap Index Fund (VMCTX)	37.915	-0.083	0.000	0.000	0.051	37.883	-0.032
Vanguard Institutional Index Fund (VINIX)	36.352	-0.048	0.000	0.000	-0.004	36.300	-0.052
Vanguard Extended Market Index Fund (VIEIX)	28.246	-0.064	0.000	0.092	0.301	28.575	0.329
Vanguard Large-Cap Index Fund (VLISX)	36.352	-0.055	0.000	0.002	0.059	36.358	0.006
Vanguard Mid-Cap Index Fund (VMCIX)	28.808	-0.052	0.000	0.009	0.046	28.812	0.004
Vanguard Small-Cap Index Fund (VSCIX)	27.414	-0.051	0.000	0.050	0.035	27.447	0.033
Vanguard Developed Markets Index Fund (VTMNX)	24.361	-0.075	0.430	0.027	-0.035	24.707	0.347
Vanguard Emerging Markets Stock Index Fund (VEMIX)	27.285	-0.125	-0.777	0.051	-1.445	24.989	-2.296
Vanguard Total International Stock Index Fund (VTSNX)	25.219	-0.113	0.125	0.034	-0.344	24.921	-0.298
Vanguard Employee Benefit Index Fund	36.352	-0.001	0.000	0.000	-0.001	36.349	-0.002

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

³ 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.

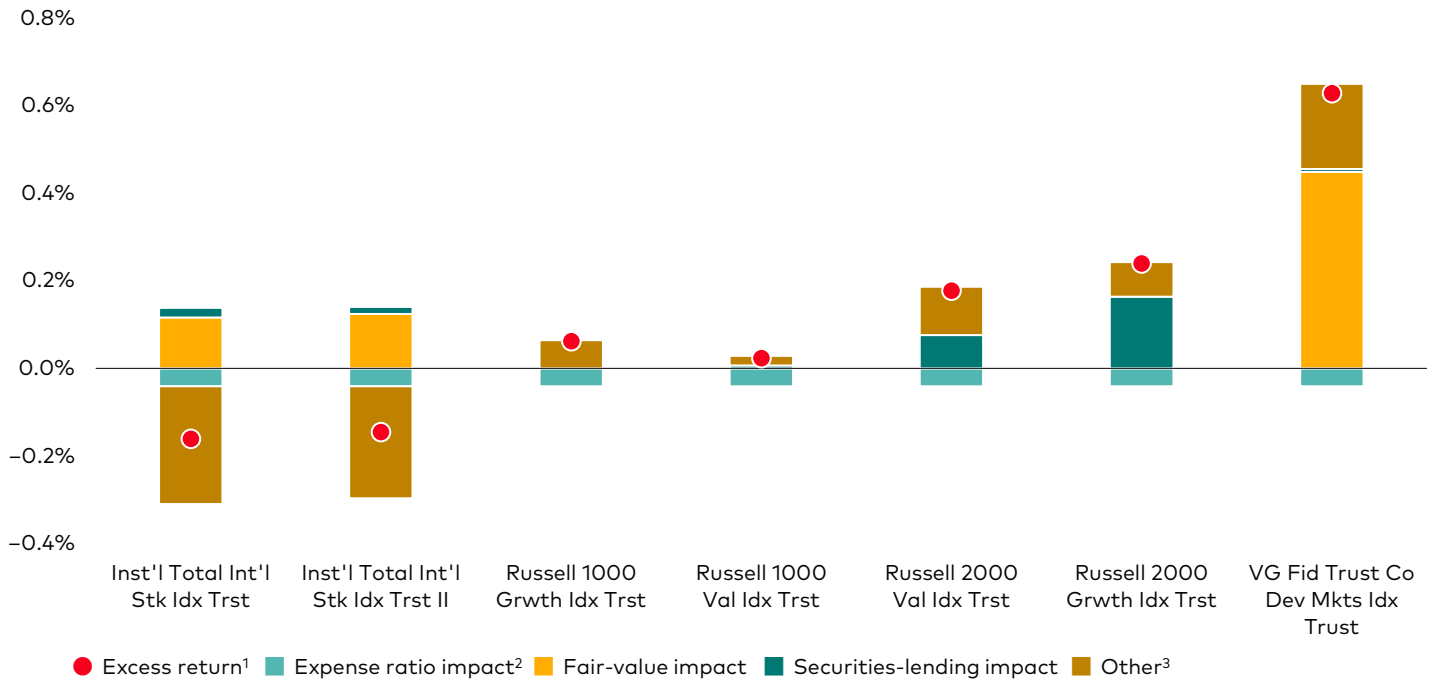
Past performance is no guarantee of future returns.





Attribution for selected Vanguard equity index trusts

Figure 21.1 One-year excess return performance attribution as of September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Securities-lending impact	Other ³	Fund return	Excess return ¹
Vanguard Institutional Total International Stock Index Trust	25.219	-0.030	0.116	0.022	-0.269	25.058	-0.161
Vanguard Institutional Total International Stock Market Index Trust II	25.219	-0.030	0.124	0.016	-0.256	25.073	-0.146
Vanguard Russell 1000 Growth Index Trust	42.190	-0.002	0.000	0.000	0.064	42.252	0.062
Vanguard Russell 1000 Value Index Trust	27.761	-0.005	0.000	0.006	0.022	27.784	0.023
Vanguard Russell 2000 Value Index Trust	25.878	-0.009	0.000	0.076	0.110	26.055	0.177
Vanguard Russell 2000 Growth Index Trust	27.658	-0.003	0.000	0.163	0.079	27.897	0.239
Vanguard Fiduciary Trust Company Developed Markets Index Trust	24.361	-0.020	0.448	0.007	0.194	24.989	0.628

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

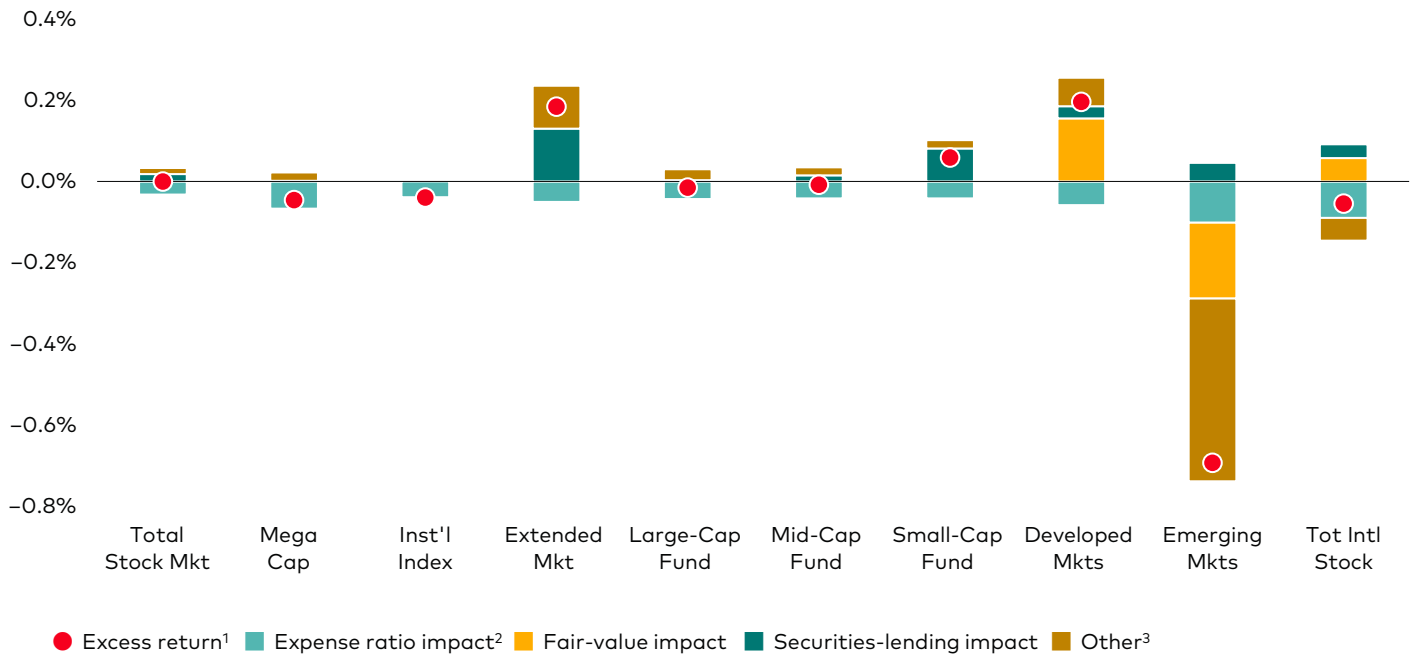
³ Other category may include fund performance impacts from the following sources: portfolio manager investment decisions, trading impact, tax withholding differences with the benchmark (funds with international investments only, India capital gains tax (not part of the benchmark methodology), and security pricing differences with the benchmark.

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 September 30, 2024



	Benchmark return	Expense ratio impact ²	Fair-value impact	Securities-lending impact	Other ³	Fund return	Excess return ¹
Vanguard Total Stock Market Index Fund (VITMX)	10.112	-0.033	0.000	0.018	0.015	10.112	0.000
Vanguard Mega Cap Index Fund (VMCTX)	12.315	-0.067	0.000	0.001	0.021	12.269	-0.046
Vanguard Institutional Index Fund (VINIX)	11.914	-0.040	0.000	0.000	-0.001	11.874	-0.040
Vanguard Extended Market Index Fund (VIEIX)	1.037	-0.051	0.000	0.130	0.105	1.222	0.184
Vanguard Large-Cap Index Fund (VLISX)	11.100	-0.044	0.000	0.003	0.027	11.085	-0.015
Vanguard Mid-Cap Index Fund (VMCIX)	5.322	-0.042	0.000	0.015	0.019	5.314	-0.008
Vanguard Small-Cap Index Fund (VSCIX)	4.311	-0.042	0.000	0.081	0.020	4.370	0.059
Vanguard Developed Markets Index Fund (VTMNX)	4.646	-0.059	0.155	0.030	0.070	4.842	0.196
Vanguard Emerging Markets Stock Index Fund (VEMIX)	2.320	-0.102	-0.187	0.045	-0.450	1.626	-0.693
Vanguard Total International Stock Index Fund (VTSNX)	4.088	-0.090	0.057	0.034	-0.056	4.032	-0.055

Numbers may not total 100% due to rounding.

Source: Vanguard. All data as of September 30, 2024, unless otherwise noted.

¹ Excess return equals fund return minus benchmark return.

² 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.

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

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	6.17	35.26	10.11	15.19	12.78	9.10	7/7/1997
Vanguard Instl Total Stock Market Index Fnd (VITNX)	0.03	6.17	35.28	10.13	15.21	12.81	9.64	8/31/2001
Vanguard High Dividend Yield ETF (VYM)								
Market price	—	8.83	28.02	10.82	11.08	10.21	8.72	11/10/2006
NAV	0.06	8.78	27.96	10.82	11.08	10.21	8.72	11/10/2006
Vanguard Russell 3000 Index Fnd (VRTTX)	0.08	6.21	35.13	10.23	15.19	12.75	13.71	11/1/2010
Large-cap								
Vanguard Institutional Index Fnd (VINIX)	0.04	5.88	36.30	11.87	15.95	13.35	10.71	7/31/1990
Vanguard Tax-Managed Capital Apprec. Fnd (VTCIX)	0.06	5.80	35.08	10.86	15.66	13.24	8.52	2/24/1999
Vanguard FTSE Social Index Fnd (VFTNX)	0.12	5.26	37.67	10.43	16.06	13.84	10.48	1/14/2003
Vanguard Large-Cap Index Fnd (VLISX)	0.04	5.77	36.36	11.09	15.86	13.25	10.77	6/30/2005
Vanguard Mega Cap Index Fnd (VMCTX)	0.06	5.07	37.88	12.27	16.78	13.86	11.57	2/22/2008
Vanguard Mega Cap Growth Index Fnd (VMGAX)	0.06	2.64	42.60	11.70	20.21	16.37	13.73	4/3/2008
Vanguard Mega Cap Value Index Fnd (VMVLX)	0.06	8.94	29.80	12.28	12.55	11.01	9.39	3/5/2008
Vanguard Value Index Fnd (VIVIX)	0.04	9.43	29.79	11.65	12.27	10.79	7.66	7/2/1998
Vanguard Growth Index Fnd (VIGIX)	0.04	2.92	41.91	10.47	19.01	15.55	9.18	5/14/1998
Vanguard 500 Index Fnd Admiral™ (VFIAX)	0.04	5.87	36.29	11.87	15.93	13.34	8.27	11/13/2000
Vanguard S&P 500 Growth ETF (VOOG)								
Market price	—	3.69	40.97	9.96	17.43	15.02	16.16	9/7/2010
NAV	0.10	3.69	40.95	9.96	17.43	15.03	16.16	9/7/2010
Vanguard S&P 500 Value Index Fnd (VSPVX)	0.08	9.03	30.99	13.03	13.13	—	10.61	3/3/2015
Vanguard Russell 1000 Index Fnd (VRNIX)	0.07	6.06	35.63	10.77	15.59	13.02	13.97	10/15/2010
Vanguard Russell 1000 Value Index Fnd (VRVIX)	0.07	9.41	27.69	8.96	10.63	9.16	10.82	12/10/2010
Vanguard Russell 1000 Growth Index Fnd (VRGWX)	0.07	3.17	42.15	11.97	19.67	16.45	16.17	12/6/2010
Vanguard Dividend Apprec. Index Fnd Adm (VDADX)	0.08	8.97	29.94	10.97	12.74	12.11	11.78	12/19/2013
Vanguard Employee Benefit Index Fnd	—	5.89	36.35	11.92	15.99	13.40	11.69	9/30/1985
Vanguard Russell 1000 Growth Index Trust	—	3.19	42.25	12.04	19.76	16.54	12.44	9/30/2003
Vanguard Russell 1000 Value Index Trust	—	9.43	27.78	9.04	10.72	9.26	9.12	9/30/2003
Mid-cap								
Vanguard Extended Market Index Fnd (VIEIX)	0.05	8.09	28.57	1.22	10.77	9.65	8.91	7/7/1997
Vanguard Mid-Cap Index Fnd (VMCIX)	0.04	9.36	28.81	5.31	11.23	10.22	10.09	5/21/1998
Vanguard S&P Mid-Cap 400 Index Fnd (VSPMX)	0.08	6.92	26.71	7.40	11.71	10.25	10.72	3/28/2011
Vanguard S&P Mid-Cap 400 Grth Index Fnd (VMFGX)	0.08	4.61	28.41	6.26	11.55	10.50	10.75	3/28/2011
Vanguard S&P Mid-Cap 400 Value Idx Fnd (VMFVX)	0.08	9.49	24.93	8.40	11.40	9.64	11.24	11/2/2010
Vanguard Mid-Cap Grth Index Fnd Adm (VMGMX)	0.07	6.25	26.00	1.70	11.19	10.58	12.47	9/27/2011
Vanguard Mid-Cap Value Index Fnd Adm (VMVAX)	0.07	11.99	31.04	8.73	10.76	9.56	12.51	9/27/2011

Source: Vanguard. All data as of September 30, 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	10.10	25.69	4.00	10.16	10.03	10.13	4/21/1999
Vanguard Small-Cap Index Fnd (VSCIX)	0.10	9.04	27.45	4.37	10.67	9.65	9.09	7/7/1997
Vanguard Small-Cap Value Index Fnd (VSIIIX)	0.10	10.54	28.69	8.23	11.61	9.59	10.12	12/7/1999
Vanguard Small-Cap Growth Index Fnd (VSGIX)	0.10	7.08	25.75	-0.94	8.62	9.19	9.11	5/24/2000
Vanguard S&P Small-Cap 600 Index Fnd (VSMSX)	0.10	10.11	25.78	3.91	10.18	10.03	10.47	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	8.92	28.43	3.42	10.48	10.64	12.85	9/7/2010
Vanguard S&P Small-Cap 600 Value Idx Fnd (VSMVX)	0.10	11.28	22.81	4.17	9.45	—	8.56	11/19/2014
Vanguard Russell 2000 Index Fnd (VRTIX)	0.10	9.29	26.83	1.90	9.47	8.87	9.38	12/22/2010
Vanguard Russell 2000 Value Index Fnd (VRTVX)	0.10	10.16	25.90	3.79	9.34	8.25	9.61	7/13/2012
Vanguard Russell 2000 Growth Index Fnd (VRTGX)	0.00	8.44	27.78	-0.26	8.93	9.08	9.61	5/25/2011
Vanguard Russell 2000 Growth Index Trust	—	8.47	27.90	-0.17	9.02	9.17	9.37	9/30/2003
Vanguard Russell 2000 Value Index Trust	—	10.18	26.06	3.88	9.43	8.34	8.67	9/30/2003
Sector								
Vanguard Real Estate Index Fnd (VGSNX)	0.11	17.19	34.21	2.53	4.79	7.35	8.43	12/2/2003
Vanguard Energy Index Fnd Admiral (VENAX)	0.10	-3.23	-0.14	22.83	14.00	2.98	6.97	10/7/2004
Vanguard Materials Index Fnd Admiral (VMIAX)	0.10	10.17	24.60	8.84	12.90	8.92	9.16	2/11/2004
Vanguard Industrials Index Fnd Admiral (VINAX)	0.10	10.86	35.17	13.02	13.84	11.82	9.49	5/8/2006
Vanguard Consumer Discretionary Index Fnd Admiral (VCDAX)	0.10	9.32	27.51	4.16	14.94	13.64	11.35	7/14/2005
Vanguard Consumer Staples Idx Fnd Admiral (VCSAX)	0.10	8.17	22.91	9.55	9.62	9.28	9.82	1/30/2004
Vanguard Health Care Index Fnd Admiral (VHCIX)	0.10	6.41	21.85	5.96	12.51	10.85	10.20	2/5/2004
Vanguard Financials Index Fnd Admiral (VFAIX)	0.10	10.67	39.56	8.22	11.95	11.36	6.17	2/4/2004
Vanguard Information Technology Idx Fnd Adm (VITAX)	0.10	1.95	42.42	14.35	23.20	20.70	14.26	3/25/2004
Vanguard Communication Services Index Fnd Admiral (VTCAX)	0.10	5.68	39.85	2.14	12.00	7.49	7.89	3/11/2005
Vanguard Utilities Index Fnd Admiral (VUIAX)	0.10	18.66	41.12	11.24	7.27	10.15	9.94	4/28/2004

Source: Vanguard. All data as of September 30, 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	7.49	24.71	4.84	8.30	5.94	5.03	1/4/2001
Vanguard European Stock Index Fnd (VESIX)	0.09	7.08	26.48	6.22	9.09	5.85	4.85	5/15/2000
Vanguard Pacific Stock Index Fnd (VPKIX)	0.08	6.97	21.46	2.12	6.57	5.68	3.72	5/15/2000
Vanguard Emerging Markets Stock Index Fnd (VEMIX)	0.10	9.29	24.99	1.63	6.42	4.21	6.87	6/22/2000
Vanguard Int'l Dividend Appreciation Index Fnd Admiral (VIAAX)	0.16	9.30	26.21	4.43	9.05	—	9.10	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	8.38	24.29	8.64	9.00	—	8.53	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	6.82	31.18	7.83	12.14	9.50	10.86	10/9/2008
Vanguard FTSE All-World ex-US Index Fnd (VFWSX)	0.08	8.01	25.34	4.39	7.88	5.53	3.71	4/30/2007
Vanguard FTSE All-World ex-US Small-Cap Index Fnd (VFSNX)	0.12	8.11	22.38	0.87	7.09	4.98	8.77	4/2/2009
Vanguard Global ex-U.S. Real Estate Index Fnd (VGRNX)	0.11	16.31	25.08	-2.55	-0.79	2.35	3.40	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	8.03	24.92	4.03	7.77	5.45	5.59	11/29/2010
Vanguard Inst'l Total International Stock Market Index Trust	—	8.07	25.06	4.14	7.90	—	8.28	6/24/2016
Vanguard Inst'l Total International Stock Market Index Trust II	0.03	8.06	25.07	4.14	—	—	8.11	8/18/2020
Vanguard Developed Markets Index Trust	—	7.55	24.99	—	—	—	4.58	12/7/2021

Source: Vanguard. All data as of September 30, 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)	17.33	-0.053	0.000	0.004	0.006	17.285	-0.043
Vanguard Institutional Total Stock Market Index Fund (VITNX)	20.60	-0.027	0.000	0.007	0.025	20.599	0.004
Vanguard Russell 3000 Index Fund (VRTTX)	20.63	-0.072	0.000	0.005	-0.004	20.561	-0.071
Vanguard Total Stock Market Index Fund (VITSX)	20.60	-0.027	0.000	0.009	0.007	20.584	-0.011
Large-cap							
Vanguard 500 Index Fund Admiral™ (VFIAX)	22.08	-0.037	0.000	0.000	-0.004	22.038	-0.041
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	17.93	-0.071	0.000	0.001	0.002	17.858	-0.068
Vanguard FTSE Social Index Fund (VFTNX)	21.72	-0.109	0.000	0.002	0.010	21.623	-0.097
Vanguard Growth Index Fund (VIGIX)	24.07	-0.037	0.000	0.000	0.004	24.038	-0.033
Vanguard Institutional Index Fund (VINIX)	22.08	-0.032	0.000	0.000	-0.002	22.045	-0.034
Vanguard Large-Cap Index Fund (VLISX)	21.80	-0.036	0.000	0.001	0.013	21.779	-0.022
Vanguard Mega Cap Growth Index Fund (VMGAX)	24.56	-0.056	0.000	0.000	-0.005	24.498	-0.061
Vanguard Mega Cap Index Fund (VMCTX)	23.27	-0.055	0.000	0.000	0.002	23.218	-0.053
Vanguard Mega Cap Value Index Fund (VMVLX)	19.55	-0.054	0.000	0.000	0.012	19.507	-0.042
Vanguard Russell 1000 Growth Index Fund (VRGWX)	24.55	-0.065	0.000	0.000	-0.010	24.475	-0.075
Vanguard Russell 1000 Index Fund (VRNIX)	21.18	-0.063	0.000	0.002	0.004	21.125	-0.057
Vanguard Russell 1000 Value Index Fund (VRVIX)	16.68	-0.061	0.000	0.005	0.013	16.636	-0.043
Vanguard S&P 500 Growth ETF (VOOG)	28.16	-0.096	0.000	0.000	-0.015	28.050	-0.111
Vanguard S&P 500 Value Index Fund (VSPVX)	15.36	-0.069	0.000	0.001	0.011	15.306	-0.058
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	21.18	-0.054	0.000	0.000	-0.439	20.688	-0.493
Vanguard Value Index Fund (VIVIX)	18.99	-0.036	0.000	0.002	0.023	18.982	-0.010
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	11.61	-0.042	0.000	0.070	0.033	11.674	0.061
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	11.44	-0.058	0.000	0.001	0.018	11.396	-0.040
Vanguard Mid-Cap Index Fund (VMCIX)	14.73	-0.034	0.000	0.007	0.015	14.715	-0.012
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	17.52	-0.062	0.000	0.016	0.043	17.514	-0.003
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	16.87	-0.070	0.000	0.001	0.015	16.812	-0.054
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	13.54	-0.068	0.000	0.004	0.012	13.486	-0.052
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	10.01	-0.066	0.000	0.006	0.023	9.970	-0.037
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	13.22	-0.068	0.000	0.116	0.038	13.311	0.086
Vanguard Russell 2000 Index Fund (VRTIX)	11.17	-0.067	0.000	0.092	0.019	11.210	0.044
Vanguard Russell 2000 Value Index Fund (VRTVX)	9.22	-0.065	0.000	0.053	0.022	9.225	0.009
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	12.57	-0.126	0.000	0.001	-0.027	12.421	-0.152
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	9.33	-0.065	0.000	0.022	-0.002	9.286	-0.045
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	6.05	-0.064	0.000	0.041	0.005	6.031	-0.017
Vanguard Small-Cap Growth Index Fund (VSGIX)	11.12	-0.050	0.000	0.057	0.010	11.136	0.018
Vanguard Small-Cap Index Fund (VSCIX)	12.35	-0.034	0.000	0.037	0.022	12.374	0.026
Vanguard Small-Cap Value Index Fund (VSIIX)	13.29	-0.051	0.000	0.020	0.019	13.274	-0.012
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	9.33	-0.049	0.000	0.000	-0.035	9.247	-0.084

Source: Vanguard. All data as of September 30, 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)	24.57	-0.093	0.000	0.097	0.045	24.617	0.049
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	12.68	-0.084	0.000	0.027	0.002	12.627	-0.055
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	16.45	-0.087	0.000	0.042	0.010	16.415	-0.036
Vanguard Energy Index Fund Admiral (VENAX)	7.01	-0.080	0.000	0.004	0.007	6.944	-0.069
Vanguard Financials Index Fund Admiral (VFAIX)	20.94	-0.091	0.000	0.004	-0.003	20.846	-0.090
Vanguard Health Care Index Fund Admiral (VHCIX)	13.85	-0.085	0.000	0.008	-0.007	13.768	-0.084
Vanguard Industrials Index Fund Admiral (VINAX)	19.10	-0.089	0.000	0.010	0.003	19.019	-0.076
Vanguard Information Technology Index Fund Admiral (VITAX)	21.93	-0.091	0.000	0.006	0.002	21.849	-0.083
Vanguard Materials Index Fund Admiral (VMIAX)	12.66	-0.084	0.000	0.007	0.007	12.594	-0.070
Vanguard Real Estate Index Fund (VGSNX)	13.71	-0.094	0.000	0.004	-0.005	13.614	-0.095
Vanguard Utilities Index Fund Admiral (VUIAX)	30.08	-0.097	0.000	0.001	-0.018	29.964	-0.114
International							
Vanguard Developed Markets Index Fund (VTMNX)	12.21	-0.050	0.016	0.018	-0.029	12.167	-0.045
Vanguard Emerging Markets Stock Index Fund (VEMIX)	19.22	-0.088	-0.854	0.034	-1.029	17.281	-1.937
Vanguard European Stock Index Fund (VESIX)	13.01	-0.076	-0.144	0.008	-0.001	12.794	-0.213
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	14.38	-0.068	-0.205	0.016	-0.128	13.994	-0.385
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	11.23	-0.100	0.006	0.100	-0.395	10.841	-0.389
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	10.89	-0.091	-0.240	0.054	0.104	10.715	-0.173
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	12.92	-0.135	0.082	0.006	0.058	12.935	0.010
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	14.44	-0.188	-0.083	0.017	0.006	14.191	-0.249
Vanguard Pacific Stock Index Fund (VPKIX)	10.38	-0.066	0.223	0.017	-0.036	10.517	0.138
Vanguard Total International Stock Index Fund (VTSNX)	14.07	-0.077	-0.182	0.024	-0.249	13.586	-0.483
Vanguard Total World Stock Index Fund (VTWIX)	18.14	-0.071	-0.069	0.011	-0.115	17.901	-0.243

Source: Vanguard. All data as of September 30, 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)	28.04	-0.077	0.000	0.005	-0.009	27.958	-0.081
Vanguard Institutional Total Stock Market Index Fund (VITNX)	35.23	-0.041	0.000	0.009	0.077	35.278	0.045
Vanguard Russell 3000 Index Fund (VRTTX)	35.19	-0.108	0.000	0.007	0.036	35.128	-0.065
Vanguard Total Stock Market Index Fund (VITSX)	35.23	-0.041	0.000	0.012	0.055	35.258	0.026
Large-cap							
Vanguard 500 Index Fund Admiral (VFIAX)	36.35	-0.055	0.000	0.000	-0.005	36.293	-0.059
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	30.04	-0.104	0.000	0.001	-0.001	29.936	-0.105
Vanguard FTSE Social Index Fund (VFTNX)	37.78	-0.165	0.000	0.003	0.049	37.668	-0.114
Vanguard Growth Index Fund (VIGIX)	41.97	-0.057	0.000	0.000	-0.005	41.906	-0.061
Vanguard Institutional Index Fund (VINIX)	36.35	-0.048	0.000	0.000	-0.004	36.300	-0.052
Vanguard Large-Cap Index Fund (VLISX)	36.35	-0.055	0.000	0.002	0.059	36.358	0.006
Vanguard Mega Cap Growth Index Fund (VMGAX)	42.69	-0.086	0.000	0.000	-0.005	42.599	-0.091
Vanguard Mega Cap Index Fund (VMCTX)	37.91	-0.083	0.000	0.000	0.051	37.883	-0.032
Vanguard Mega Cap Value Index Fund (VMVLX)	29.75	-0.078	0.000	0.000	0.130	29.804	0.052
Vanguard Russell 1000 Growth Index Fund (VRGWX)	42.19	-0.100	0.000	0.001	0.059	42.150	-0.040
Vanguard Russell 1000 Index Fund (VRNIX)	35.68	-0.095	0.000	0.003	0.041	35.628	-0.051
Vanguard Russell 1000 Value Index Fund (VRVIX)	27.76	-0.089	0.000	0.006	0.013	27.691	-0.070
Vanguard S&P 500 Growth ETF (VOOG)	41.10	-0.141	0.000	0.000	-0.005	40.952	-0.146
Vanguard S&P 500 Value Index Fund (VSPVX)	31.09	-0.105	0.000	0.001	0.001	30.990	-0.104
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	35.68	-0.081	0.000	0.000	-0.521	35.078	-0.602
Vanguard Value Index Fund (VIVIX)	29.71	-0.052	0.000	0.004	0.133	29.794	0.084
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	28.25	-0.064	0.000	0.092	0.301	28.575	0.329
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	26.06	-0.088	0.000	0.002	0.025	26.002	-0.062
Vanguard Mid-Cap Index Fund (VMCIX)	28.81	-0.052	0.000	0.009	0.046	28.812	0.004
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	31.05	-0.092	0.000	0.022	0.053	31.037	-0.017
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	28.49	-0.103	0.000	0.002	0.023	28.409	-0.078
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	26.79	-0.101	0.000	0.004	0.016	26.707	-0.081
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	24.99	-0.100	0.000	0.008	0.028	24.931	-0.064
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	27.66	-0.102	0.000	0.153	0.076	27.785	0.127
Vanguard Russell 2000 Index Fund (VRTIX)	26.76	-0.102	0.000	0.120	0.047	26.828	0.066
Vanguard Russell 2000 Value Index Fund (VRTVX)	25.88	-0.101	0.000	0.067	0.057	25.901	0.023
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	28.65	-0.193	0.000	0.002	-0.027	28.434	-0.217
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	25.86	-0.101	0.000	0.027	-0.004	25.783	-0.078
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	22.85	-0.098	0.000	0.049	0.004	22.805	-0.046
Vanguard Small-Cap Growth Index Fund (VSGIX)	25.70	-0.076	0.000	0.077	0.048	25.748	0.050
Vanguard Small-Cap Index Fund (VSCIX)	27.41	-0.051	0.000	0.050	0.035	27.447	0.033
Vanguard Small-Cap Value Index Fund (VSIIIX)	28.72	-0.077	0.000	0.026	0.018	28.691	-0.033
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	25.86	-0.075	0.000	0.000	-0.098	25.687	-0.174

Source: Vanguard. All data as of September 30, 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)	39.81	-0.140	0.000	0.122	0.059	39.849	0.041
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	27.60	-0.128	0.000	0.036	0.004	27.510	-0.088
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	22.99	-0.123	0.000	0.047	-0.003	22.908	-0.079
Vanguard Energy Index Fund Admiral (VENAX)	-0.05	-0.100	0.000	0.004	0.013	-0.137	-0.083
Vanguard Financials Index Fund Admiral (VFAIX)	39.70	-0.140	0.000	0.011	-0.016	39.556	-0.145
Vanguard Health Care Index Fund Admiral (VHCIX)	21.96	-0.122	0.000	0.011	-0.002	21.849	-0.113
Vanguard Industrials Index Fund Admiral (VINAX)	35.28	-0.135	0.000	0.013	0.014	35.174	-0.108
Vanguard Information Technology Index Fund Admiral (VITAX)	42.38	-0.143	0.000	0.009	0.169	42.415	0.035
Vanguard Materials Index Fund Admiral (VMIAX)	24.71	-0.125	0.000	0.008	0.003	24.597	-0.114
Vanguard Real Estate Index Fund (VGSNX)	34.38	-0.148	0.000	0.005	-0.021	34.214	-0.163
Vanguard Utilities Index Fund Admiral (VUIAX)	41.28	-0.141	0.000	0.002	-0.022	41.119	-0.161
International							
Vanguard Developed Markets Index Fund (VTMNX)	24.36	-0.075	0.430	0.027	-0.035	24.707	0.347
Vanguard Emerging Markets Stock Index Fund (VEMIX)	27.28	-0.125	-0.777	0.051	-1.445	24.989	-2.296
Vanguard European Stock Index Fund (VESIX)	26.11	-0.114	0.475	0.011	-0.009	26.476	0.363
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	25.49	-0.100	0.116	0.023	-0.192	25.341	-0.153
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	22.68	-0.147	0.224	0.150	-0.532	22.379	-0.306
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	25.04	-0.138	0.046	0.098	0.035	25.084	0.041
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	25.95	-0.202	0.426	0.008	0.026	26.209	0.257
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	24.34	-0.274	0.239	0.021	-0.032	24.294	-0.045
Vanguard Pacific Stock Index Fund (VPKIX)	21.15	-0.097	0.410	0.034	-0.038	21.462	0.309
Vanguard Total International Stock Index Fund (VTSNX)	25.22	-0.113	0.125	0.034	-0.344	24.921	-0.298
Vanguard Total World Stock Index Fund (VTWIX)	31.33	-0.105	0.061	0.016	-0.127	31.177	-0.155

Source: Vanguard. All data as of September 30, 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)	10.90	-0.067	0.000	0.005	-0.012	10.823	-0.074
Vanguard Institutional Total Stock Market Index Fund (VITNX)	10.11	-0.033	0.000	0.015	0.041	10.134	0.023
Vanguard Russell 3000 Index Fund (VRTTX)	10.29	-0.088	0.000	0.012	0.014	10.226	-0.062
Vanguard Total Stock Market Index Fund (VITSX)	10.11	-0.033	0.000	0.018	0.015	10.112	0.000
Large-cap							
Vanguard 500 Index Fund Admiral (VFIAX)	11.91	-0.045	0.000	0.000	-0.004	11.866	-0.048
Vanguard Dividend Appreciation Index Fund Admiral (VDADX)	11.06	-0.089	0.000	0.000	0.002	10.973	-0.086
Vanguard FTSE Social Index Fund (VFTNX)	10.55	-0.133	0.000	0.003	0.019	10.434	-0.111
Vanguard Growth Index Fund (VIGIX)	10.50	-0.044	0.000	0.002	0.007	10.466	-0.036
Vanguard Institutional Index Fund (VINIX)	11.91	-0.040	0.000	0.000	-0.001	11.874	-0.040
Vanguard Large-Cap Index Fund (VLISX)	11.10	-0.044	0.000	0.003	0.027	11.085	-0.015
Vanguard Mega Cap Growth Index Fund (VMGAX)	11.76	-0.067	0.000	0.001	0.005	11.702	-0.061
Vanguard Mega Cap Index Fund (VMCTX)	12.31	-0.067	0.000	0.001	0.021	12.269	-0.046
Vanguard Mega Cap Value Index Fund (VMVLX)	12.30	-0.067	0.000	0.001	0.047	12.279	-0.019
Vanguard Russell 1000 Growth Index Fund (VRGWX)	12.02	-0.078	0.000	0.002	0.021	11.969	-0.055
Vanguard Russell 1000 Index Fund (VRNIX)	10.83	-0.078	0.000	0.007	0.017	10.774	-0.054
Vanguard Russell 1000 Value Index Fund (VRVIX)	9.03	-0.076	0.000	0.011	0.000	8.961	-0.065
Vanguard S&P 500 Growth ETF (VOOG)	10.08	-0.110	0.000	0.000	-0.006	9.960	-0.116
Vanguard S&P 500 Value Index Fund (VSPVX)	13.12	-0.090	0.000	0.000	0.000	13.032	-0.090
Vanguard Tax-Managed Capital Appreciation Fund (VTCIX)	10.83	-0.067	0.000	0.000	0.101	10.862	0.035
Vanguard Value Index Fund (VIVIX)	11.65	-0.045	0.000	0.005	0.043	11.649	0.003
Mid-cap							
Vanguard Extended Market Index Fund (VIEIX)	1.04	-0.051	0.000	0.130	0.105	1.222	0.184
Vanguard Mid-Cap Growth Index Fund Admiral (VMGMX)	1.73	-0.071	0.000	0.009	0.026	1.697	-0.036
Vanguard Mid-Cap Index Fund (VMCIX)	5.32	-0.042	0.000	0.015	0.019	5.314	-0.008
Vanguard Mid-Cap Value Index Fund Admiral (VMVAX)	8.77	-0.076	0.000	0.023	0.016	8.733	-0.037
Vanguard S&P Mid-Cap 400 Growth Index Fund (VMFGX)	6.32	-0.085	0.000	0.023	0.006	6.262	-0.056
Vanguard S&P Mid-Cap 400 Index Fund (VSPMX)	7.47	-0.086	0.000	0.017	0.002	7.403	-0.067
Vanguard S&P Mid-Cap 400 Value Index Fund (VMFVX)	8.45	-0.087	0.000	0.014	0.020	8.398	-0.053
Small-cap							
Vanguard Russell 2000 Growth Index Fund (VRTGX)	-0.35	-0.080	0.000	0.160	0.013	-0.258	0.093
Vanguard Russell 2000 Index Fund (VRTIX)	1.84	-0.082	0.000	0.126	0.013	1.902	0.057
Vanguard Russell 2000 Value Index Fund (VRTVX)	3.77	-0.083	0.000	0.080	0.019	3.786	0.016
Vanguard S&P Small-Cap 600 Growth ETF (VIOG)	3.59	-0.155	0.000	0.005	-0.023	3.421	-0.173
Vanguard S&P Small-Cap 600 Index Fund (VSMSX)	3.99	-0.083	0.000	0.016	-0.012	3.912	-0.078
Vanguard S&P Small-Cap 600 Value Index Fund (VSMVX)	4.23	-0.083	0.000	0.026	-0.003	4.168	-0.060
Vanguard Small-Cap Growth Index Fund (VSGIX)	-1.00	-0.059	0.000	0.105	0.015	-0.940	0.061
Vanguard Small-Cap Index Fund (VSCIX)	4.31	-0.042	0.000	0.081	0.020	4.370	0.059
Vanguard Small-Cap Value Index Fund (VSIIX)	8.22	-0.065	0.000	0.061	0.011	8.231	0.007
Vanguard Tax-Managed Small-Cap Fund (VTSIX)	3.99	-0.062	0.000	0.000	0.067	3.996	0.005

Source: Vanguard. All data as of September 30, 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)	2.08	-0.102	0.000	0.149	0.016	2.140	0.063
Vanguard Consumer Discretionary Index Fund Admiral (VCDAX)	4.22	-0.104	0.000	0.030	0.007	4.157	-0.067
Vanguard Consumer Staples Index Fund Admiral (VCSAX)	9.61	-0.110	0.000	0.049	0.001	9.549	-0.059
Vanguard Energy Index Fund Admiral (VENAX)	22.95	-0.123	0.000	0.003	0.006	22.832	-0.114
Vanguard Financials Index Fund Admiral (VFAIX)	8.30	-0.108	0.000	0.017	0.014	8.219	-0.078
Vanguard Health Care Index Fund Admiral (VHCIX)	6.05	-0.106	0.000	0.009	0.010	5.960	-0.087
Vanguard Industrials Index Fund Admiral (VINAX)	13.12	-0.113	0.000	0.013	0.005	13.025	-0.095
Vanguard Information Technology Index Fund Admiral (VITAX)	14.43	-0.114	0.000	0.009	0.028	14.348	-0.078
Vanguard Materials Index Fund Admiral (VMIAX)	8.94	-0.109	0.000	0.007	0.003	8.839	-0.099
Vanguard Real Estate Index Fund (VGSNX)	2.63	-0.108	0.000	0.003	0.005	2.532	-0.101
Vanguard Utilities Index Fund Admiral (VUIAX)	11.36	-0.111	0.000	0.001	-0.005	11.239	-0.116
International							
Vanguard Developed Markets Index Fund (VTMNX)	4.65	-0.059	0.155	0.030	0.070	4.842	0.196
Vanguard Emerging Markets Stock Index Fund (VEMIX)	2.32	-0.102	-0.187	0.045	-0.450	1.626	-0.693
Vanguard European Stock Index Fund (VESIX)	6.06	-0.102	0.123	0.014	0.127	6.218	0.161
Vanguard FTSE All-World ex-US Index Fund (VFWSX)	4.45	-0.087	0.047	0.024	-0.039	4.390	-0.055
Vanguard FTSE All-World ex-US Small-Cap Index Fund (VFSNX)	0.87	-0.117	0.108	0.142	-0.129	0.872	0.003
Vanguard Global ex-U.S. Real Estate Index Fund (VGRNX)	-2.93	-0.107	0.008	0.085	0.393	-2.554	0.379
Vanguard International Dividend Appreciation Index Fund Admiral (VIAAX)	4.30	-0.167	0.112	0.007	0.181	4.429	0.133
Vanguard International High Dividend Yield Index Fund Admiral (VIHAX)	8.81	-0.239	0.099	0.021	-0.051	8.638	-0.170
Vanguard Pacific Stock Index Fund (VPKIX)	1.96	-0.082	0.240	0.035	-0.034	2.124	0.160
Vanguard Total International Stock Index Fund (VTSNX)	4.09	-0.090	0.057	0.034	-0.056	4.032	-0.055
Vanguard Total World Stock Index Fund (VTWIX)	7.90	-0.086	0.026	0.021	-0.035	7.825	-0.074

Source: Vanguard. All data as of September 30, 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

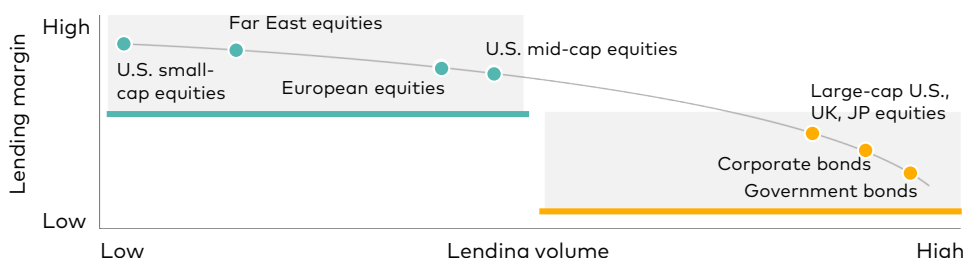


Vanguard securities-lending program overview

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 3Q2024

Goldman Sachs & Co. LLC	\$3,263,401,603
JP Morgan Securities LLC	\$3,092,034,865
Morgan Stanley & Co. LLC	\$2,114,348,923
Barclays Capital Inc	\$1,847,064,480
BofA Securities Inc	\$1,658,578,792



Market Liquidity Fund sector allocation and key characteristics

Treasuries	39.7%
Agencies	12.9%
Repurchase agreements	45.4%
Cash	2.0%

Average maturity	16
Expense ratio	0.5 bps
SEC yield	5.01%
Number of holdings	151

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 September 30, 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	\$25,103,000	0.08%	\$2,121,869	0.01%
Vanguard Russell 3000 Index Fund	2023	\$7,069,796	0.24%	\$582,676	0.02%
	2024 YTD	\$1,456,947	0.04%	\$187,310	0.01%
Vanguard High Dividend Yield Index Fund	2023	\$36,822,279	0.06%	\$3,293,054	0.01%
	2024 YTD	\$26,403,936	0.04%	\$2,721,204	0.00%
Vanguard Total Stock Market Index Fund	2023	\$3,448,565,391	0.27%	\$308,412,738	0.02%
	2024 YTD	\$3,357,452,704	0.21%	\$137,706,393	0.01%
Large-cap					
Vanguard 500 Index Fund	2023	\$78,261,604	0.01%	\$515,874	0.00%
	2024 YTD	\$69,430,274	0.01%	\$2,662,246	0.00%
Vanguard Dividend Appreciation Index Fund	2023	\$664,721	0.00%	\$4,607	0.00%
	2024 YTD	\$10,796,547	0.01%	\$639,097	0.00%
Vanguard Employee Benefit Index Fund	2023	\$11,844,156	0.06%	\$258,659	0.00%
	2024 YTD	\$6,876,680	0.03%	\$45,486	0.00%
Vanguard FTSE Social Index Fund	2023	\$8,110,997	0.06%	\$700,422	0.00%
	2024 YTD	\$3,535,626	0.02%	\$394,670	0.00%
Vanguard Growth Index Fund	2023	\$91,929,916	0.06%	\$2,333,592	0.00%
	2024 YTD	\$18,589,083	0.01%	\$442,041	0.00%
Vanguard Institutional Index Fund	2023	\$21,684,834	0.01%	\$171,120	0.00%
	2024 YTD	\$14,126,402	0.00%	\$577,359	0.00%
Vanguard Large-Cap Index Fund	2023	\$22,115,441	0.06%	\$1,119,570	0.00%
	2024 YTD	\$4,039,034	0.01%	\$646,168	0.00%
Vanguard Mega Cap Growth Index Fund	2023	\$96,451	0.00%	\$1,260	0.00%
	2024 YTD	\$70,922	0.00%	\$2,214	0.00%
Vanguard Mega Cap Index Fund	2023	\$16,383	0.00%	\$274	0.00%
	2024 YTD	\$11,428	0.00%	\$513	0.00%
Vanguard Mega Cap Value Index Fund	2023	\$0	0.00%	\$79	0.00%
	2024 YTD	\$7,894	0.00%	\$66	0.00%
Vanguard Russell 1000 Growth Index Fund	2023	\$9,189,082	0.06%	\$454,236	0.00%
	2024 YTD	\$2,681,348	0.01%	\$90,074	0.00%
Vanguard Russell 1000 Growth Index Trust	2023	\$3,798,573	0.08%	\$134,326	0.00%
	2024 YTD	\$1,636,042	0.03%	\$20,128	0.00%
Vanguard Russell 1000 Index Fund	2023	\$7,488,639	0.13%	\$685,292	0.01%
	2024 YTD	\$1,628,604	0.02%	\$163,570	0.00%
Vanguard Russell 1000 Value Index Fund	2023	\$17,030,689	0.21%	\$1,733,580	0.02%
	2024 YTD	\$6,843,191	0.07%	\$496,834	0.01%
Vanguard Russell 1000 Value Index Trust	2023	\$12,338,557	0.45%	\$585,993	0.02%
	2024 YTD	\$7,904,981	0.27%	\$137,496	0.00%
Vanguard S&P 500 Growth Index Fund	2023	\$144,383	0.00%	\$3,399	0.00%
	2024 YTD	\$49,186	0.00%	\$2,060	0.00%
Vanguard S&P 500 Value Index Fund	2023	\$1,213,664	0.03%	\$3,256	0.00%
	2024 YTD	\$331,762	0.01%	\$26,306	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	\$37,764,511	0.02%	\$4,047,589	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 September 30, 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	\$1,536,512,325	1.55%	\$69,328,282	0.07%
Vanguard Mid-Cap Growth Index Fund	2023	\$76,923,670	0.38%	\$2,060,779	0.01%
	2024 YTD	\$12,291,755	0.05%	\$314,380	0.00%
Vanguard Mid-Cap Index Fund	2023	\$466,749,867	0.33%	\$23,785,257	0.02%
	2024 YTD	\$148,060,329	0.09%	\$10,641,138	0.01%
Vanguard Mid-Cap Value Index Fund	2023	\$82,274,038	0.30%	\$6,749,974	0.02%
	2024 YTD	\$38,696,113	0.14%	\$4,492,902	0.02%
Vanguard S&P Mid-Cap 400 Growth Index Fund	2023	\$824,850	0.09%	\$22,124	0.00%
	2024 YTD	\$618,113	0.05%	\$16,349	0.00%
Vanguard S&P Mid-Cap 400 Index Fund	2023	\$10,597,155	0.36%	\$464,894	0.02%
	2024 YTD	\$6,616,088	0.20%	\$126,883	0.00%
Vanguard S&P Mid-Cap 400 Value Index Fund	2023	\$6,110,978	0.69%	\$320,209	0.04%
	2024 YTD	\$2,959,223	0.30%	\$61,968	0.01%
Small-cap					
Vanguard Russell 2000 Growth Index Fund	2023	\$25,497,343	2.66%	\$1,898,671	0.20%
	2024 YTD	\$12,580,172	1.10%	\$1,324,285	0.12%
Vanguard Russell 2000 Growth Index Trust	2023	\$72,178,361	3.95%	\$3,256,894	0.18%
	2024 YTD	\$90,985,618	4.48%	\$2,518,375	0.12%
Vanguard Russell 2000 Index Fund	2023	\$155,554,612	2.40%	\$10,006,211	0.15%
	2024 YTD	\$150,455,660	1.63%	\$8,480,755	0.09%
Vanguard Russell 2000 Value Index Fund	2023	\$20,719,232	2.14%	\$1,163,797	0.12%
	2024 YTD	\$6,320,530	0.70%	\$473,421	0.05%
Vanguard Russell 2000 Value Index Trust	2023	\$17,252,621	3.07%	\$620,375	0.11%
	2024 YTD	\$16,044,439	2.82%	\$326,442	0.06%
Vanguard S&P Small-Cap 600 Index Fund	2023	\$21,602,762	0.53%	\$669,764	0.02%
	2024 YTD	\$33,120,842	0.73%	\$1,019,454	0.02%
Vanguard S&P Small-Cap 600 Growth Index Fund	2023	\$1,615,519	0.30%	\$46,630	0.01%
	2024 YTD	\$407,539	0.05%	\$11,943	0.00%
Vanguard S&P Small-Cap 600 Value Index Fund	2023	\$9,063,206	0.69%	\$325,205	0.02%
	2024 YTD	\$14,541,819	1.04%	\$578,652	0.04%
Vanguard Small-Cap Growth Index Fund	2023	\$604,882,033	2.10%	\$45,193,301	0.16%
	2024 YTD	\$601,065,486	1.79%	\$19,287,691	0.06%
Vanguard Small-Cap Index Fund	2023	\$1,598,785,782	1.35%	\$165,861,150	0.14%
	2024 YTD	\$1,714,728,410	1.24%	\$51,369,617	0.04%
Vanguard Small-Cap Value Index Fund	2023	\$363,672,060	0.77%	\$60,848,100	0.13%
	2024 YTD	\$386,300,551	0.73%	\$10,591,306	0.02%
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 September 30, 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	\$19,664,361	0.33%	\$1,635,539	0.03%
Vanguard Consumer Staples Index Fund	2023	\$12,571,974	0.16%	\$5,098,140	0.06%
	2024 YTD	\$6,874,916	0.09%	\$3,296,480	0.04%
Vanguard Energy Index Fund	2023	\$24,239,156	0.24%	\$328,480	0.00%
	2024 YTD	\$15,066,175	0.15%	\$406,431	0.00%
Vanguard Financials Index Fund	2023	\$26,960,922	0.30%	\$1,914,573	0.02%
	2024 YTD	\$10,491,296	0.11%	\$435,940	0.00%
Vanguard Health Care Index Fund	2023	\$37,328,070	0.19%	\$1,484,950	0.01%
	2024 YTD	\$29,738,131	0.15%	\$1,608,829	0.01%
Vanguard Industrials Index Fund	2023	\$13,663,734	0.32%	\$754,699	0.02%
	2024 YTD	\$10,127,235	0.19%	\$536,178	0.01%
Vanguard Information Technology Index Fund	2023	\$132,241,032	0.24%	\$7,378,383	0.01%
	2024 YTD	\$185,759,919	0.24%	\$5,065,758	0.01%
Vanguard Materials Index Fund	2023	\$6,905,519	0.18%	\$339,532	0.01%
	2024 YTD	\$7,767,933	0.19%	\$281,067	0.01%
Vanguard Real Estate II Index Fund	2023	\$30,652,421	0.38%	\$302,051	0.00%
	2024 YTD	\$15,927,844	0.18%	\$286,519	0.00%
Vanguard Real Estate Index Fund	2023	\$170,307,321	0.27%	\$2,137,999	0.00%
	2024 YTD	\$185,586,159	0.29%	\$2,388,385	0.00%
Vanguard Communication Services Index Fund	2023	\$21,334,986	0.70%	\$10,228,824	0.33%
	2024 YTD	\$14,040,694	0.34%	\$3,969,459	0.10%
Vanguard Utilities Index Fund	2023	\$7,603,431	0.11%	\$78,001	0.00%
	2024 YTD	\$6,778,465	0.10%	\$91,227	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 September 30, 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	\$1,776,131,363	0.95%	\$34,002,856	0.02%
Vanguard Emerging Markets Stock Index Fund	2023	\$1,301,348,487	1.33%	\$50,319,812	0.05%
	2024 YTD	\$1,144,926,999	1.10%	\$35,323,201	0.03%
Vanguard European Stock Index Fund	2023	\$96,720,439	0.42%	\$3,237,972	0.01%
	2024 YTD	\$83,344,971	0.33%	\$2,110,995	0.01%
Vanguard Fiduciary Trust Company Developed Markets Index Trust	2023	\$1,134,147	0.04%	\$48,213	0.00%
	2024 YTD	\$6,428,578	0.18%	\$203,723	0.01%
Vanguard FTSE All-World ex-US Index Fund	2023	\$492,229,175	0.98%	\$11,572,948	0.02%
	2024 YTD	\$401,762,512	0.73%	\$8,759,354	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	\$377,776,710	3.63%	\$10,393,029	0.10%
Vanguard Global ex-U.S. Real Estate Index Fund	2023	\$92,994,995	2.28%	\$4,596,763	0.11%
	2024 YTD	\$63,328,196	1.65%	\$2,082,601	0.05%
Vanguard Institutional Total International Stock Index Trust	2023	\$248,015,013	1.10%	\$6,447,012	0.03%
	2024 YTD	\$237,575,227	0.84%	\$4,108,023	0.01%
Vanguard Institutional Total International Stock Market Index Trust II	2023	\$957,371,183	0.57%	\$36,672,790	0.02%
	2024 YTD	\$839,066,273	0.41%	\$20,264,048	0.01%
Vanguard International Dividend Appreciation Index Fund	2023	\$33,849,047	0.66%	\$429,413	0.01%
	2024 YTD	\$28,283,463	0.41%	\$380,065	0.01%
Vanguard International High Dividend Yield Index Fund	2023	\$48,719,213	0.76%	\$1,175,933	0.02%
	2024 YTD	\$60,748,912	0.78%	\$1,301,469	0.02%
Vanguard Pacific Stock Index Fund	2023	\$150,315,364	1.67%	\$4,630,359	0.05%
	2024 YTD	\$77,502,338	0.78%	\$1,720,383	0.02%
Vanguard Total International Stock Index Fund	2023	\$5,257,853,479	1.42%	\$137,659,017	0.04%
	2024 YTD	\$4,774,038,025	1.14%	\$98,769,325	0.02%
Vanguard Total World Stock Index Fund	2023	\$236,448,663	0.64%	\$9,620,693	0.03%
	2024 YTD	\$200,634,492	0.43%	\$5,151,909	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 September 30, 2024, unless otherwise noted.

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Benchmark methodologies

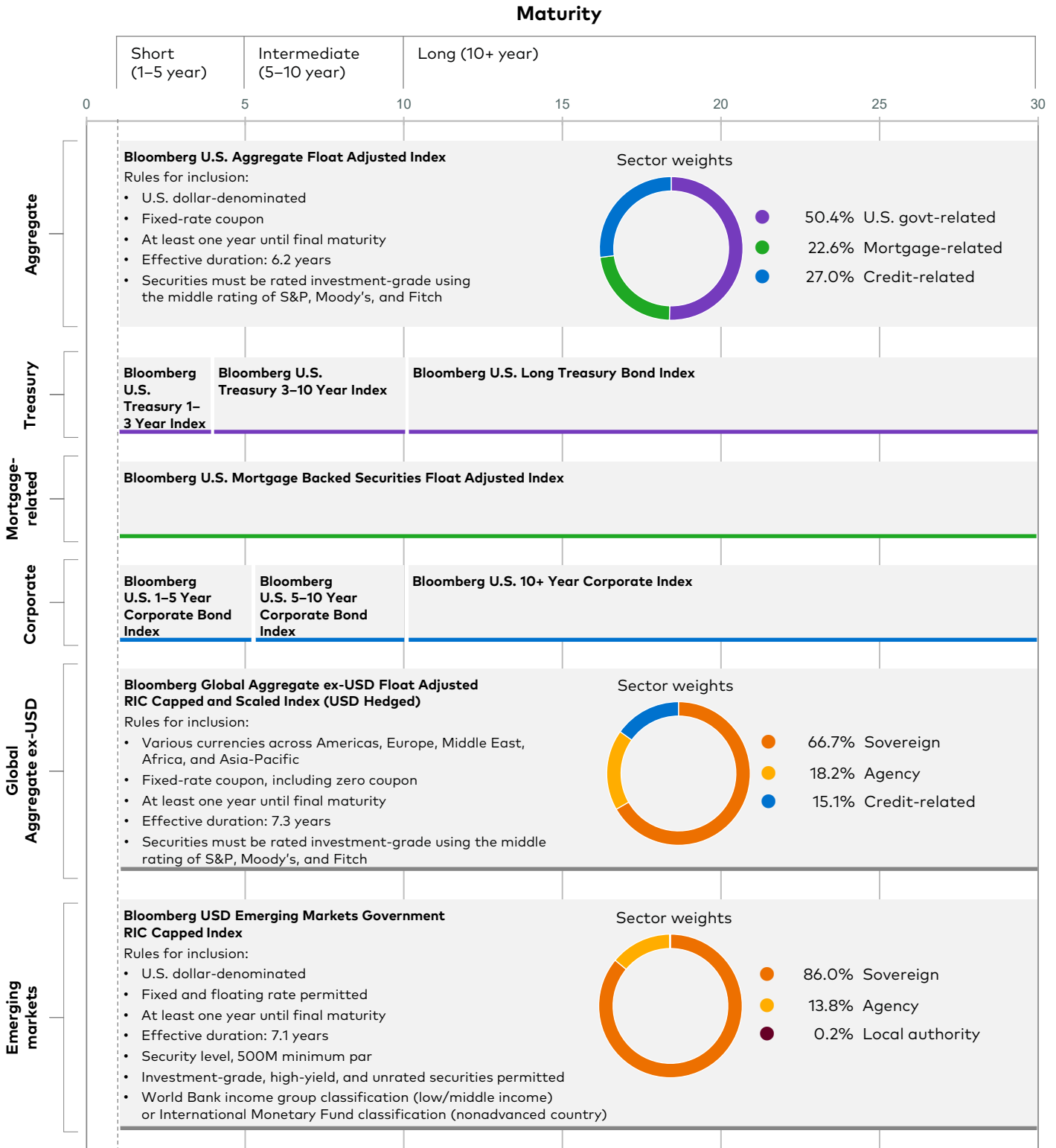
IN THIS SECTION:
Fixed income
Equity



Benchmark methodologies overview

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

Figure 39.1 Fixed income benchmark composition



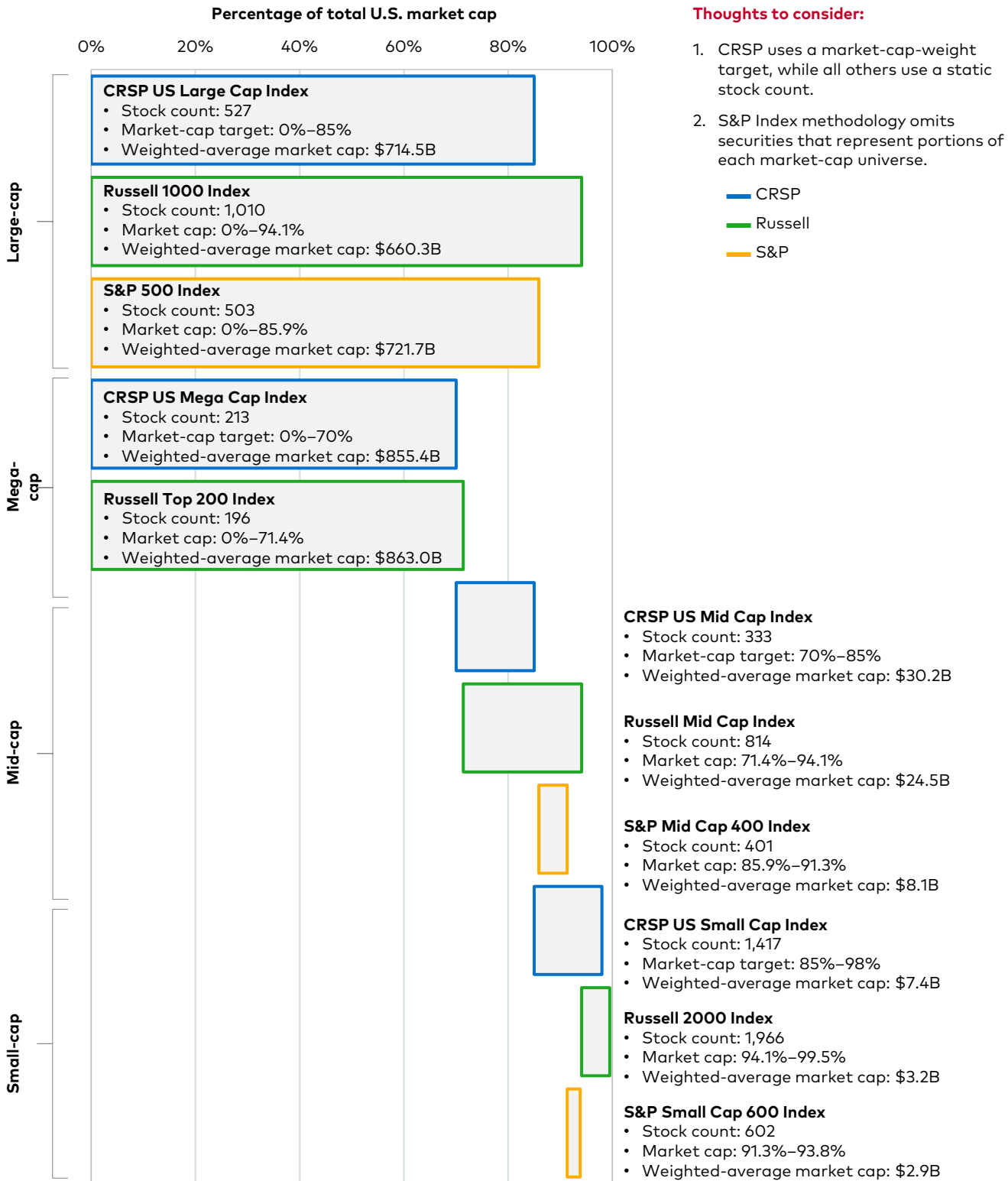
Numbers may not add to 100% due to rounding. All index characteristics data as of December 31, 2023.



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

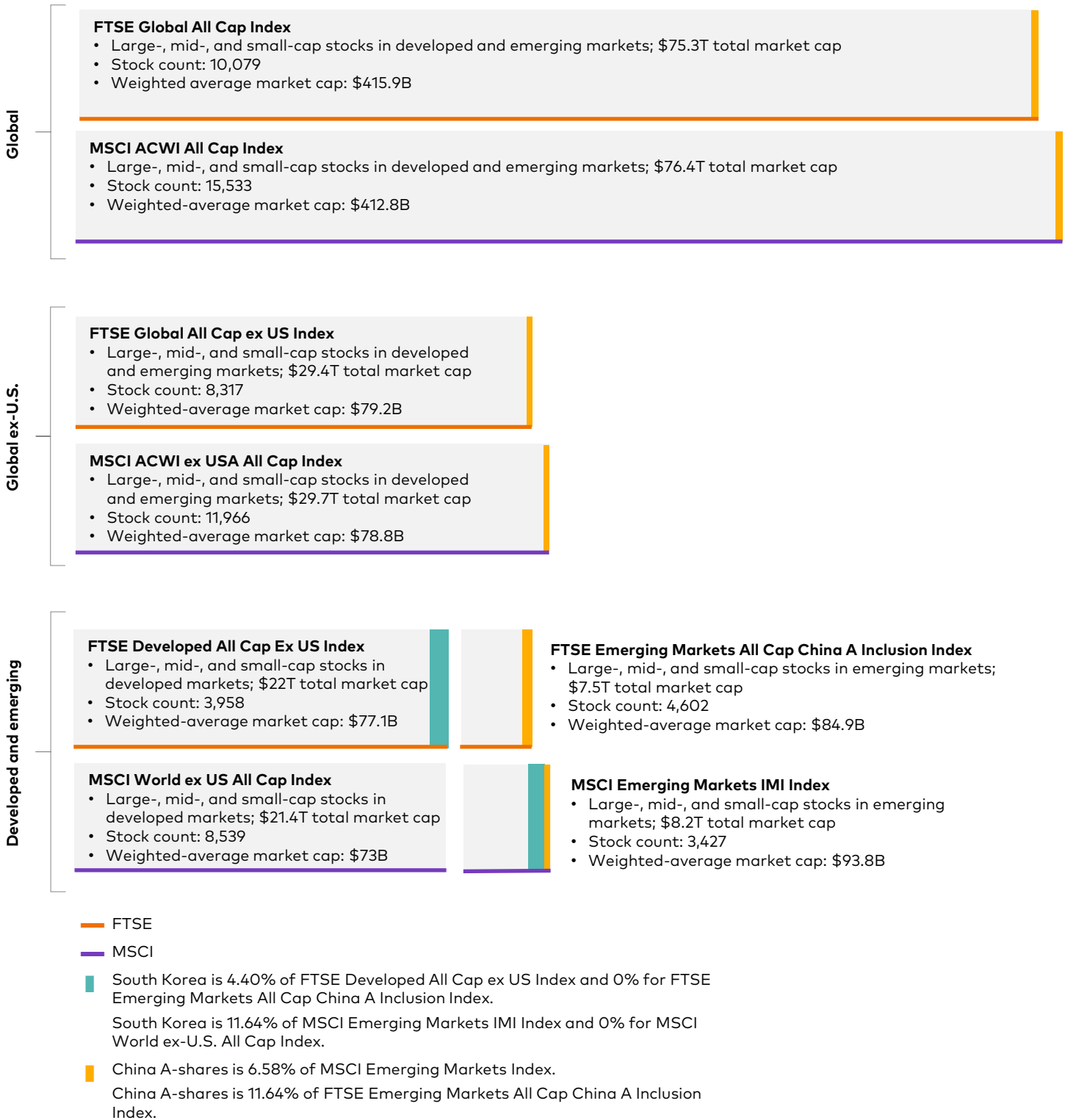


CRSP is shown as a targeted market cap, while the others are shown as a percentage of the S&P Total Stock Market. All index characteristics data as of December 31, 2023.



Benchmark methodologies overview

Figure 41.1 Global equity benchmark methodology comparison



All index characteristics data as of December 31, 2023.

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.

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