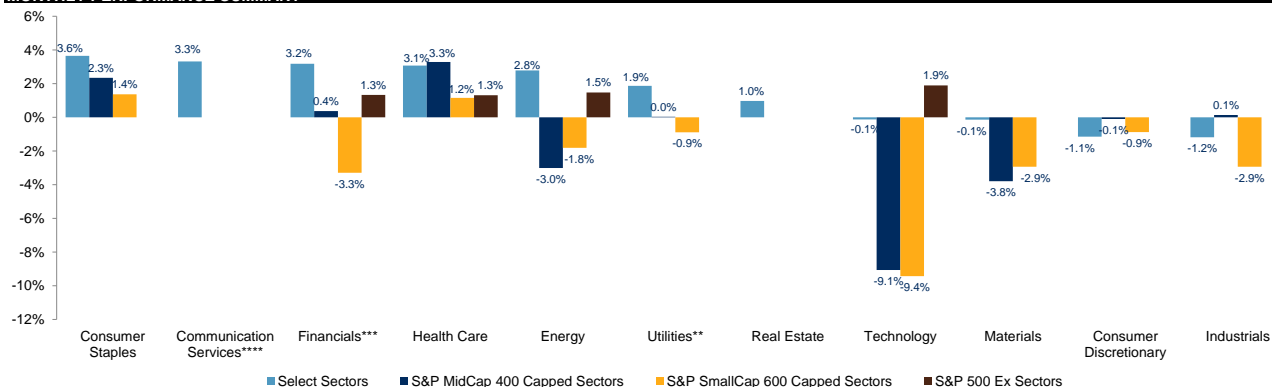


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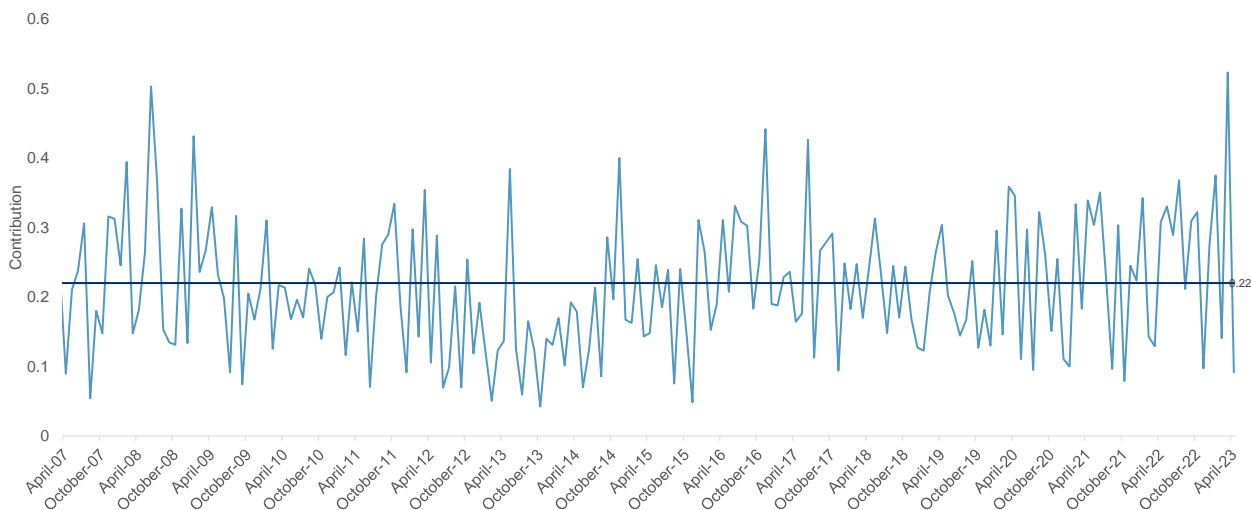
INDEX INVESTMENT STRATEGY
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U.S. Sector Dashboard
 April 28, 2023

MONTHLY PERFORMANCE SUMMARY



SECTOR	Select Sectors			S&P MidCap 400 Capped Sectors			S&P SmallCap 600 Capped Sectors			S&P 500 Ex Sectors		
	MTD	3M	12M	MTD	3M	12M	MTD	3M	12M	MTD	3M	12M
Consumer Discretionary	-1.15%	-0.25%	-8.31%	-0.10%	-6.10%	4.69%	-0.88%	-5.17%	1.24%			
Consumer Staples	3.65%	5.55%	2.43%	2.34%	1.36%	11.24%	1.37%	3.78%	11.81%			
Energy	2.79%	-4.28%	18.12%	-3.01%	-15.94%	-8.99%	-1.81%	-14.99%	-4.74%	1.48%	3.09%	1.95%
Financials***	3.18%	-8.82%	-1.82%							1.33%	4.56%	3.85%
Real Estate	0.97%	-6.34%	-15.92%	0.37%	-11.89%	-8.38%	-3.29%	-17.78%	-17.28%			
Health Care	3.07%	0.51%	4.17%	3.29%	-0.27%	-0.13%	1.16%	-5.19%	-7.26%	1.31%	3.10%	2.42%
Industrials	-1.18%	-1.42%	7.04%	0.14%	-0.53%	13.73%	-2.93%	-5.09%	9.16%			
Materials	-0.14%	-4.44%	-3.03%	-3.79%	-8.12%	-1.78%	-2.93%	-6.18%	2.76%			
Technology	-0.12%	11.18%	7.83%	-9.07%	-6.33%	0.41%	-9.43%	-9.65%	-3.71%	1.89%	-0.67%	0.55%
Utilities**	1.87%	0.57%	-0.21%									
Communication Services	3.32%	9.10%	2.44%	0.03%	-4.90%	-0.84%	-0.89%	-5.08%	-2.93%			

CONTRIBUTION OF SECTORS TO S&P 500 DISPERSION*



COMMENTARY

- Most large-cap sectors posted gains in April, with Consumer Staples and Communication Services in the lead.
- The contribution of cross-sector effects to total S&P 500® dispersion declined from its March peak, indicating fewer relative rewards for sector allocation decisions.

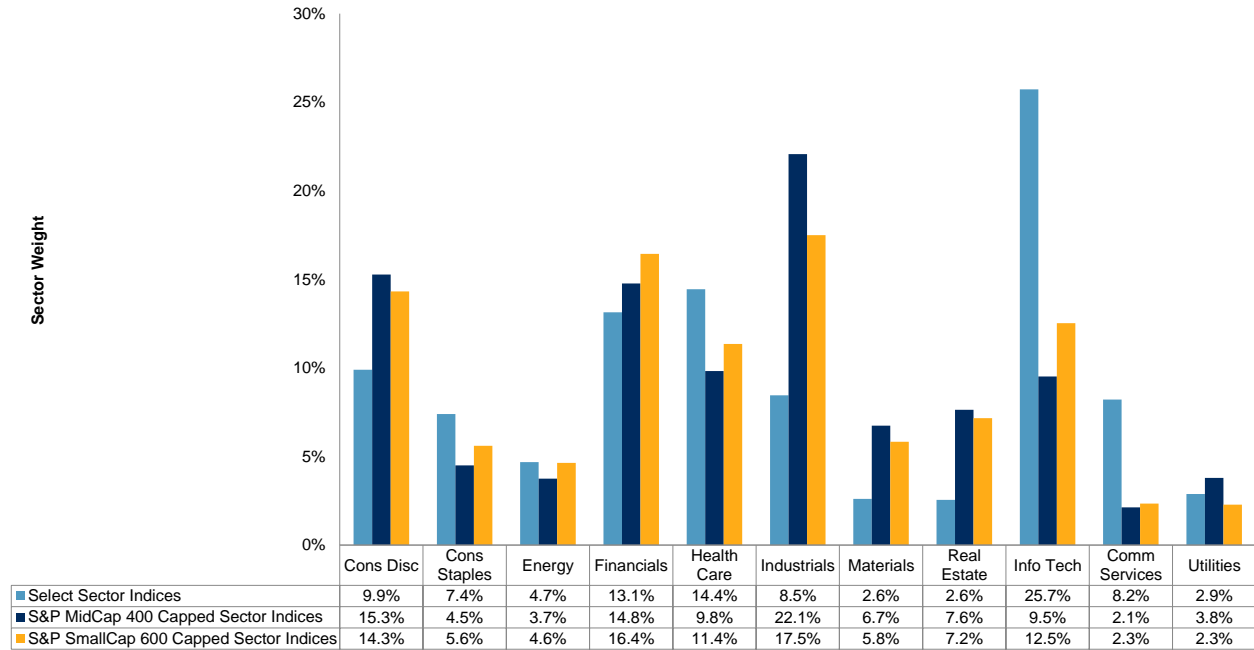
*See pages 11-13 of "Sector Effects in the S&P 500®: The Role of Sectors, in Risk, Pricing, and Active Returns" for details on the strength of sector-level effects in the S&P 500.

**Utilities MidCap and SmallCap Capped Sectors include constituents of the GICS® Utilities and Communication Services sectors.

***Financials & Real Estate MidCap and SmallCap Capped Sectors combines constituents of the GICS® Financials and Real Estate sectors. S&P 500 Ex-Financials & Real Estate excludes members of the GICS Financials and Real Estate sectors.

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of April 28, 2023.

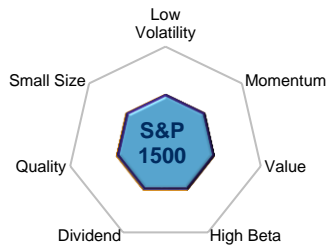
INDEX COMPOSITION



KEY TO FACTOR SCORINGS FOR INDICES

Factor Definitions

Each constituent of the S&P 1500 index is provided with a factor "score" for each of Beta, Volatility, Momentum, Dividend, Size, Value and Quality.



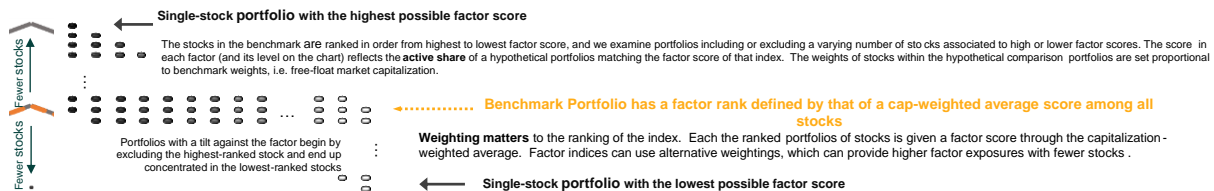
Factor	Measurement at single-stock level
Volatility	Trailing 12-month daily return volatility
Momentum	Twelve-month price change as of one month ago ("13 minus 1 momentum"), divided by the daily volatility during the twelve-month period that ended one month ago. For more details, see the S&P Momentum methodology
Value	The average of (normalized) earnings to price ratio, book to price ratio and sales to price ratio. For more details, see the S&P Value methodology.
Beta	Trailing 1 year beta of stock daily returns to the benchmark's return.
Dividend	Trailing 12-month dividend
Quality	The average of the (normalized) return on equity, the negative of the accruals ratio and the negative of the financial leverage ratio. For more details, see the S&P Quality methodology.
Size	Free-float market capitalization

Index Factor Ranking and Factor Diagram Scaling

Index Scores

Each index is provided a score in each factor from -100% to +100% based on how much of the total capitalization of the benchmark must be excluded in order to provide a portfolio of stocks with similar exposure to that factor. This is done by examining a ranked series of hypothetical cap-weighted portfolios, including or excluding an increasing number of the stocks with the highest or lowest scores. An illustration of the process may be found at this [link](#).

Factor Diagram Axis

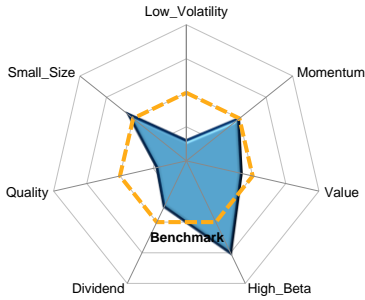


COMMENTARY

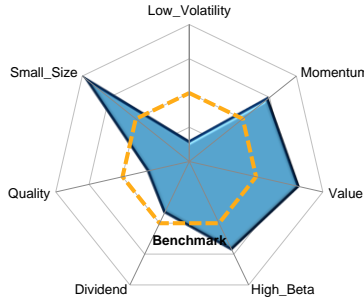
- The diagrams below illustrate factor exposures relative to the S&P 1500 across sectors, from large to small-caps.
- For example, large-cap Consumer Discretionary has a tilt away from Low Volatility, which deepens at the mid and small-cap levels.

FACTOR TILTS

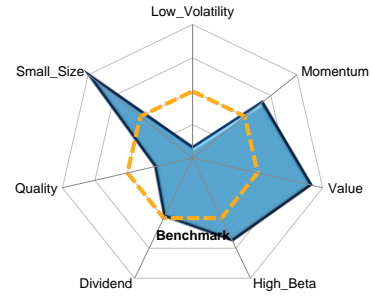
Consumer Discretionary Select Sector



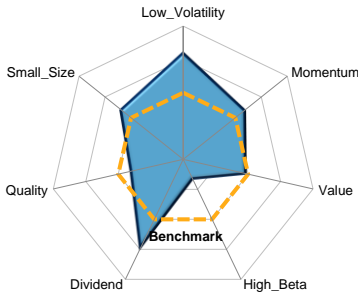
S&P MidCap 400 Capped Consumer Discretionary



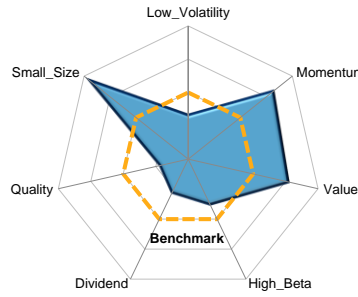
S&P SmallCap 600 Capped Consumer Discretionary



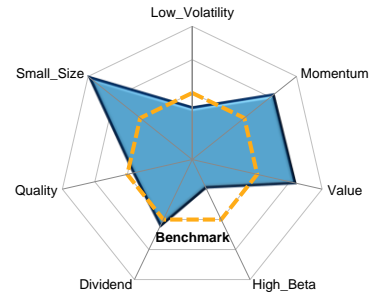
Consumer Staples Select Sector



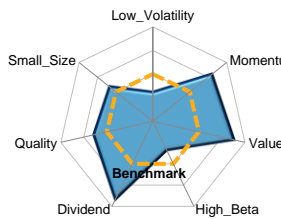
S&P MidCap 400 Capped Consumer Staples



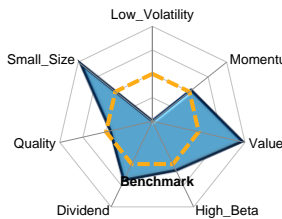
S&P SmallCap 600 Capped Consumer Staples



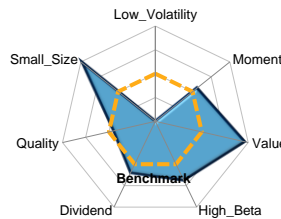
Energy Select Sector



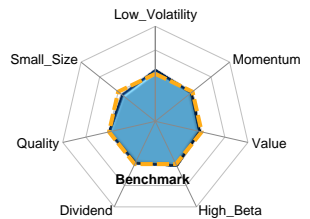
S&P MidCap 400 Capped Energy



S&P SmallCap 600 Capped Energy

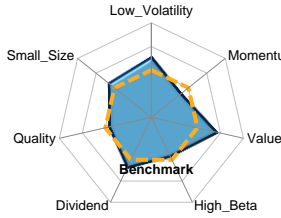


S&P 500 Ex-Energy

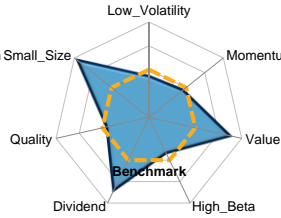


FACTOR TILTS

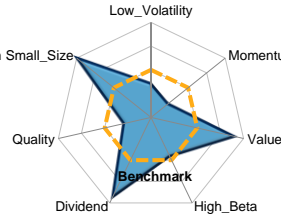
Financial Select Sector



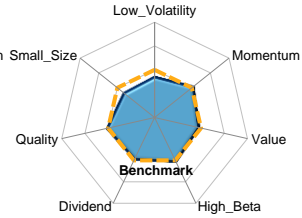
S&P MidCap 400 Capped Fin



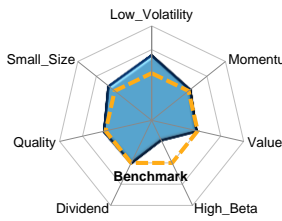
S&P SmallCap 600 Capped Fin & Real Estate*



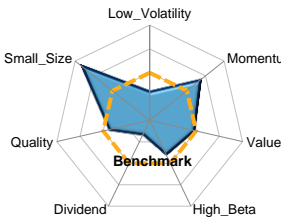
S&P 500 Ex-Fin & Real Estate



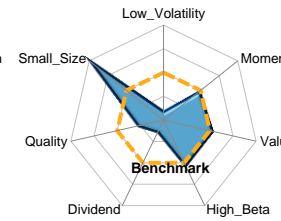
Health Care Select Sector



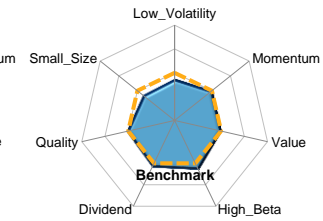
S&P MidCap 400 Capped Health Care



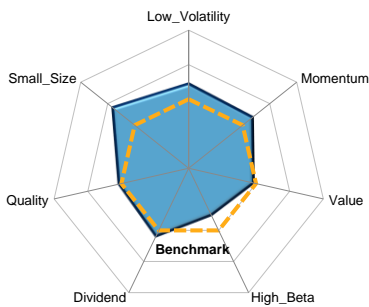
S&P SmallCap 600 Capped Health Care



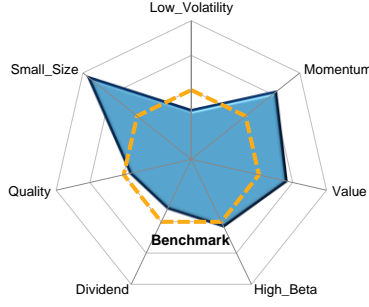
S&P 500 Ex-Health Care



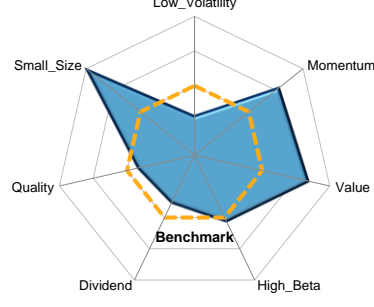
Industrial Select Sector



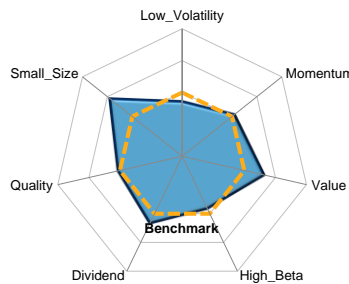
S&P MidCap 400 Capped Industrials



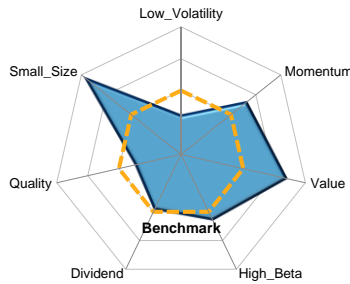
S&P SmallCap 600 Capped Industrials



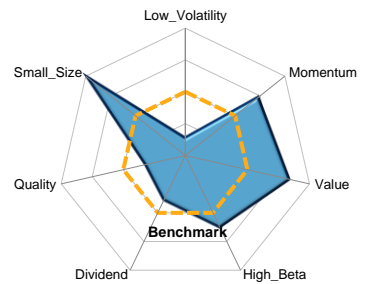
Materials Select Sector



S&P MidCap 400 Capped Materials



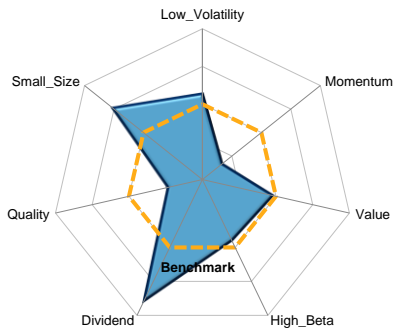
S&P SmallCap 600 Capped Materials



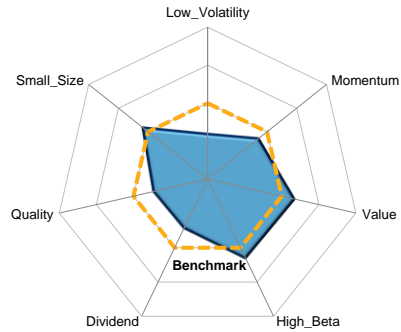
*Financials & Real Estate SmallCap Capped Sector combines constituents of the GICS Financials and Real Estate sectors. Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of April 28, 2023.

FACTOR TILTS

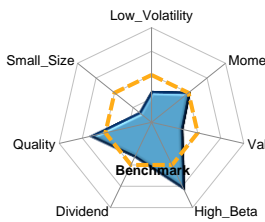
Real Estate Select Sector



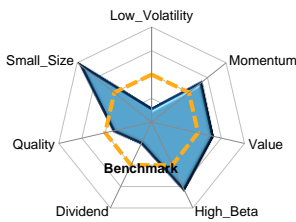
Communication Services Select Sector



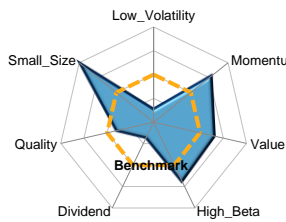
Technology Select Sector



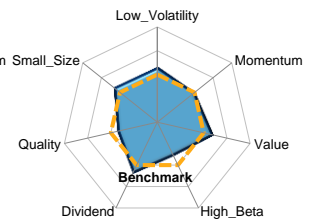
S&P MidCap 400 Capped Info Tech



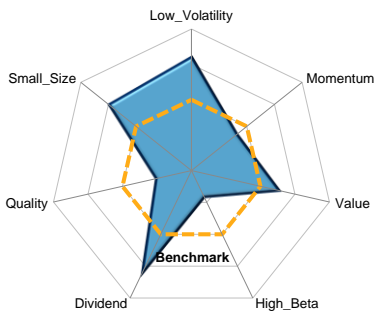
S&P SmallCap 600 Capped Info Tech



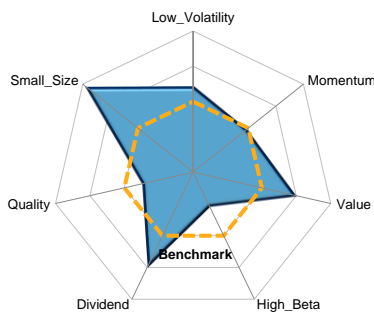
S&P 500 Ex-Info Tech



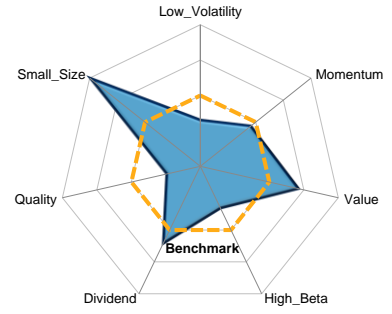
Utilities Select Sector



S&P MidCap 400 Capped Utilities & Comm Services **



S&P SmallCap 600 Capped Utilities & Comm Services **



**Utilities MidCap and SmallCap Capped Sectors include constituents of the GICS Utilities and Communication Services sectors. Source: S&P Dow Jones Indices LLC and/or its affiliates. Data as of April 28, 2023.

SELECTED KEY METRICS - SELECT SECTOR INDICES

METRICS	DIV YIELD	P/E	P/B	P/S	BETA	CONSTITUENT VOLATILITY	RSI - 30 DAY	VALUE SCORE	GROWTH SCORE
Communication Services	0.9%	39.5	3.2	2.5	1.07	38.4%	62.7	0.09	-0.11
Consumer Discretionary	1.0%	37.2	8.0	1.9	1.27	41.9%	56.0	-0.13	0.04
Consumer Staples	2.6%	27.9	6.3	1.5	0.60	25.6%	72.5	-0.08	0.15
Energy	3.7%	8.1	2.3	1.0	0.82	38.2%	62.1	0.21	0.55
Financials	1.9%	20.3	1.9	2.5	0.95	29.6%	57.5	0.15	0.06
Health Care	1.7%	24.6	4.8	1.8	0.68	28.3%	61.9	-0.10	0.26
Industrials	1.8%	23.8	5.0	2.0	0.89	29.9%	54.3	-0.10	-0.01
Materials	2.0%	17.4	2.9	1.8	0.96	34.0%	59.9	0.03	0.15
Real Estate	3.6%	30.6	2.9	6.1	0.94	31.4%	54.0	-0.11	-0.11
Technology	1.1%	29.9	8.6	5.5	1.30	37.5%	59.9	-0.23	0.15
Utilities	3.1%	25.9	2.2	2.4	0.65	25.7%	55.5	0.07	0.05

SELECTED KEY METRICS - S&P MIDCAP 400 CAPPED SECTORS

METRICS	DIV YIELD	P/E	P/B	P/S	BETA	CONSTITUENT VOLATILITY	RSI - 30 DAY	VALUE SCORE	GROWTH SCORE
Consumer Discretionary	1.6%	11.2	2.1	0.6	1.19	48.0%	57.0	0.12	0.06
Consumer Staples	0.5%	24.3	3.7	0.6	0.86	37.4%	67.4	0.10	0.28
Energy	2.4%	6.7	1.4	0.8	1.07	51.3%	51.8	0.13	0.70
Financials	3.3%	11.0	1.4	1.7	0.90	34.0%	51.6	0.09	0.14
Health Care	0.2%	46.8	3.2	2.4	0.98	43.6%	63.0	-0.19	0.09
Industrials	1.1%	17.9	3.0	1.2	1.03	36.4%	55.3	-0.04	0.13
Information Technology	0.4%	27.9	2.9	1.1	1.30	44.7%	44.0	-0.08	0.00
Materials	1.5%	12.0	2.3	0.9	1.07	38.3%	51.7	0.14	0.24
Utilities & Comm Services**	2.5%	19.4	1.9	1.8	0.72	30.3%	52.9	-0.03	0.18

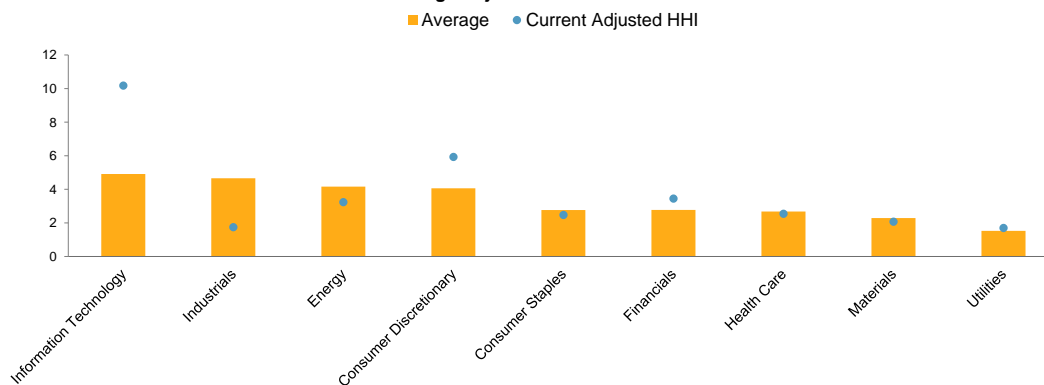
SELECTED KEY METRICS - S&P SMALLCAP 600 CAPPED SECTORS

METRICS	DIV YIELD	P/E	P/B	P/S	BETA	CONSTITUENT VOLATILITY	RSI - 30 DAY	VALUE SCORE	GROWTH SCORE
Consumer Discretionary	1.6%	11.2	2.1	0.6	1.19	48.0%	51.8	0.27	0.11
Consumer Staples	1.8%	21.6	2.4	0.8	0.69	35.7%	59.9	-0.07	0.22
Energy	2.0%	8.0	1.3	0.7	1.20	60.1%	52.5	0.09	0.41
Financials & Real Estate*	3.7%	13.6	1.1	1.6	0.95	36.5%	43.2	0.01	0.00
Health Care	0.2%	81.0	2.6	1.6	1.01	47.5%	52.4	-0.27	0.13
Industrials	1.0%	15.9	2.0	0.8	1.02	39.0%	49.5	0.03	0.17
Information Technology	0.2%	32.3	2.4	1.4	1.19	44.8%	40.2	-0.17	0.17
Materials	1.0%	18.9	2.0	0.7	1.14	44.8%	51.7	0.03	0.16
Utilities & Comm Services**	2.0%	93.7	1.9	1.0	0.80	37.5%	51.7	-0.06	0.00

SELECTED KEY METRICS - S&P 500 EX SECTORS

METRICS	DIV YIELD	P/E	P/B	P/S	BETA	CONSTITUENT VOLATILITY	RSI - 30 DAY	VALUE SCORE	GROWTH SCORE
Ex-Energy	1.6%	27.2	4.3	2.6	1.00	33.1%	0.0	-0.09	0.10
Ex-Financials & Real Estate	1.6%	25.2	5.2	2.3	1.00	33.9%	0.0	-0.11	0.14
Ex-Health Care	1.7%	24.5	4.1	2.5	1.05	34.1%	0.0	-0.07	0.10
Ex-Information Technology	1.9%	22.4	3.4	1.9	0.87	31.8%	62.3	0.00	0.11

Current and Average Adjusted HHI for S&P 500 GICS Sectors***



COMMENTARY

- Consumer Staples had the highest relative strength among sectors across large-caps.
- Average constituent volatility in the Consumer Discretionary sector was the highest among large-caps, while Energy led among mid and small-caps.

For details on definitions of fundamental metrics, please refer to the disclosure section. Value and Growth scores are rescored for the S&P Total Market Index universe annually every December.

*Financials & Real Estate SmallCap Capped Sector combines constituents of the GICS Financials and Real Estate sectors.

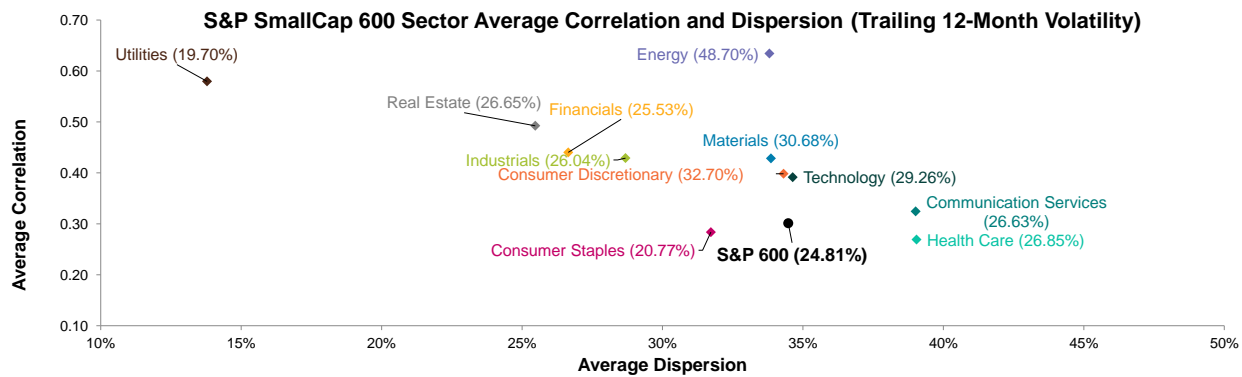
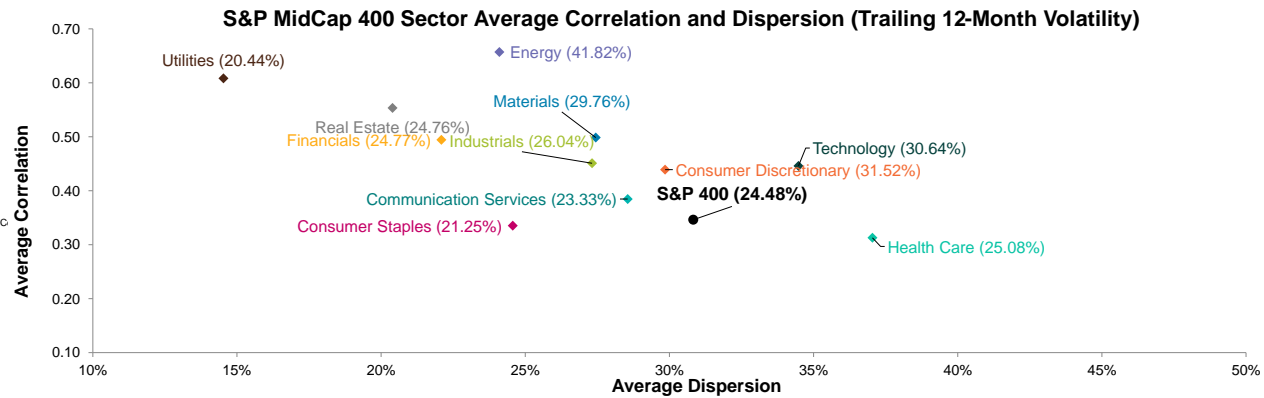
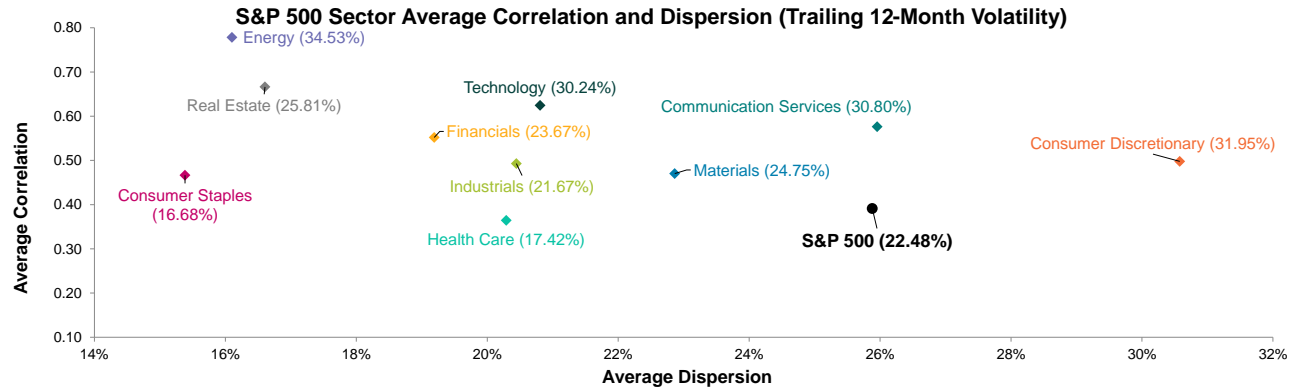
**Utilities MidCap and SmallCap Capped Sectors include constituents of the GICS Utilities and Communication Services sectors.

Source: S&P Dow Jones Indices LLC and/or its affiliates and FactSet. Data as of April 28, 2023.

COMMENTARY

- Dispersion declined across most sectors, especially for large-cap and mid-cap Financials.
- Correlation declined across most sectors, with significant decreases for large-cap Consumer Staples and mid-cap Information Technology.

SECTOR DISPERSION AND CORRELATION



NOTES

- The charts above decomposed volatility into its two main components: dispersion and correlation. The data points are each sector's average monthly value over the trailing 12 months. Trailing annualized volatility is included in parentheses. Index dispersions shown based on stock-level index-weighted dispersion over the calendar month. Index correlation based on single stock daily total returns during each calendar month. See ["Implications of Sector Dispersion"](#) for more information.
- See ["At the Intersection of Diversification, Volatility and Correlation"](#) for details on the relationship between correlation and dispersion.
- See ["Dispersion: Measuring Market Opportunity"](#) for the definition of index dispersion and more information on the uses of dispersion.

General Disclaimer

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Notes On Additional Index Statistics

STATISTIC	NOTES
Price/Earnings (P/E)	Price per share as of observation date divided by earnings per share, calculated by adding the last twelve calendar months' quarterly reported earnings per share.
Price/Book (P/B)	Price per share as of observation date divided by latest annual reported book value per share.
Price/Sales (P/S)	Price per share as of observation date divided by sales per share, calculated by adding twelve calendar months' quarterly reported sales per share.
RSI - 30 Day	RSI is an indicator of the speed and change of price movements and oscillates between zero and 100. RSI is considered overbought when above 70 and oversold when below 30. RS is the average gain divided by average loss over the past 30 days. Then RSI is equal to 100 minus 100 divided by 1+RS.