

## Sector Primer Series: Consumer Discretionary

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### INTRODUCTION

The Global Industry Classification Standard® (GICS®) assigns a company to a single business classification according to its principal business activity. This assignment uses quantitative and qualitative factors, including revenues, earnings, and market perception. The sector is the first level of the four-tiered, hierarchical industry classification system that includes 11 sectors, 24 industry groups, 69 industries, and 158 sub-industries. GICS was developed in 1999 and is jointly managed by S&P Dow Jones Indices and MSCI.

The Consumer Discretionary sector comprises companies primarily engaged in:

- Manufacturing consumer products including durables, leisure products, apparel, and luxury goods;
- Retail, as distributors, internet and direct marketing retailers, specialty retailers, and multiline retailers such as department stores;
- Providing consumer services such as restaurants, hotels, resorts, and casinos; and
- Manufacturing automobiles and automobile components.

Exhibit 1: GICS of the Consumer Discretionary Sector

SECTOR	INDUSTRY GROUP	INDUSTRY	SUB-INDUSTRY	
Consumer Discretionary Code (25)	Automobiles & Components Code (2510)	Auto Components Code (251010)	Auto Parts & Equipment Code (25101010)	
			Tires & Rubber Code (25101020)	
		Automobiles Code (251020)	Automobile Manufacturers Code (25102010)	
			Motorcycle Manufacturers Code (25102020)	
	Consumer Durables & Apparel Code (2520)	Household Durables Code (252010)		Consumer Electronics Code (25201010)
				Home Furnishings Code (25201020)
				Homebuilding Code (25201030)
				Household Appliances Code (25201040)
			Housewares & Specialties Code (25201050)	
		Leisure Products Code (252020)	Leisure Products Code (25202010)	
	Textiles, Apparel & Luxury Goods Code (252030)		Apparel, Accessories & Luxury Goods Code (25203010)	
			Footwear Code (25203020)	
			Textiles Code (25203030)	
	Consumer Services Code (2530)	Hotels, Restaurants & Leisure Code (253010)		Casinos & Gaming Code (25301010)
				Hotels, Resorts & Cruise Lines Code (25301020)
				Leisure Facilities Code (25301030)
			Restaurants Code (25301040)	
		Diversified Consumer Services Code (253020)		Education Services Code (25302010)
				Specialized Consumer Services Code (25302020)
	Retailing Code (2550)	Distributors Code (255010)		Distributors Code (25501010)
				Internet & Direct Marketing Retail Code (255020)
		Multiline Retail Code (255030)		Department Stores Code (25503010)
				General Merchandise Stores Code (25503020)
Specialty Retail Code (255040)			Apparel Retail Code (25504010)	
			Computer & Electronics Retail Code (25504020)	
			Home Improvement Retail Code (25504030)	
			Specialty Stores Code (25504040)	
			Automotive Retail Code (25504050)	
	Homefurnishing Retail Code (25504060)			

Source: S&amp;P Dow Jones Indices LLC, MSCI. Data as of Dec. 31, 2018. Table is provided for illustrative purposes.

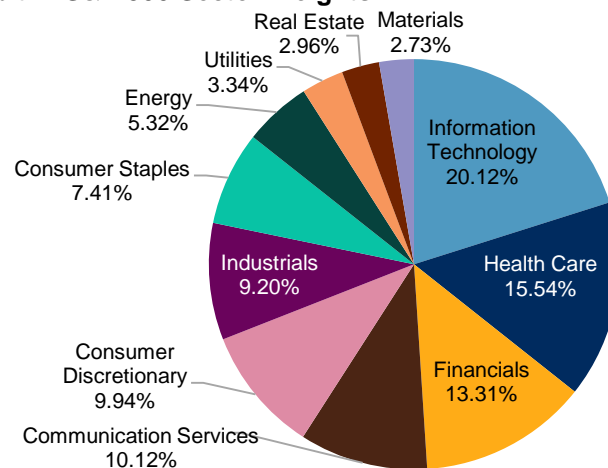
## COMPOSITION

The [S&P 500 Consumer Discretionary](#) comprises all companies in the S&P 500 included in the sector by GICS. Created in 1957, the [S&P 500](#) was the first broad U.S. market-cap-weighted stock market index. Today, it is the basis of many listed and over-the-counter investment instruments.

*Consumer Discretionary is the fifth-heaviest sector in the S&P 500...*

The Consumer Discretionary sector is the fifth most heavily weighted of the 11 sectors within the S&P 500. As of Dec. 31, 2018, the sector represented 9.94% of the S&P 500 (see Exhibit 2). Since the index is market-capitalization weighted, this sector has an above-average influence on the overall index performance.

**Exhibit 2: S&P 500 Sector Weights**



*...representing 9.94% of the index at year-end 2018.*

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Chart is provided for illustrative purposes.

There is a slightly higher exposure to Consumer Discretionary in the mid- and small-cap indices. Consumer Discretionary had the fourth-heaviest sector weight in the [S&P MidCap 400](#)<sup>®</sup> and [S&P SmallCap 600](#)<sup>®</sup>, at 11.74% and 14.01%, respectively. Overall, in the [S&P Total Market Index](#), which consists of over 3,800 stocks—including those in the S&P 500, S&P MidCap 400, S&P SmallCap 600, and micro caps—the Consumer Discretionary sector was the fourth largest, with 436 securities and a weight of 10.27%.

*The sector was the fourth heaviest in the S&P MidCap 400 and S&P SmallCap 600.*

With a total float-adjusted market capitalization of USD 2,090,382.87 million, 64 companies comprised the S&P 500 Consumer Discretionary as of Dec. 31, 2018. The two largest companies in the sector were Amazon.com Inc (AMZN) and Home Depot Inc (HD), with float-adjusted market caps of USD 616,910.09 million and USD 194,075.50 million, translating to S&P 500 weights of 2.93% and 0.92%, respectively. Amazon.com Inc was not only the largest company within the Consumer Discretionary sector, but also the fourth largest in the S&P 500. The mean market cap of S&P 500 Consumer Discretionary stocks was USD 32,159.74 million, the median market cap was USD 11,452.98 million, and

the minimum market cap was USD 3,110.39 million. The top 10 Consumer Discretionary holdings made up 67.45% of the sector (see Exhibit 3).

**Exhibit 3: Snapshot of the Top 10 Holdings in the S&P 500 Consumer Discretionary**

CONSTITUENT NAME	TICKER	S&P 500 WEIGHT (%)	S&P 500 CONSUMER DISCRETIONARY INDEX WEIGHT (%)
Amazon.com Inc	AMZN	2.93	29.51
Home Depot Inc	HD	0.92	9.28
McDonald's Corp	MCD	0.65	6.55
NIKE Inc	NKE	0.45	4.52
Starbucks Corp	SBUX	0.38	3.82
Booking Holdings Inc	BKNG	0.38	3.82
Lowe's Cos Inc	LOW	0.35	3.55
TJX Cos Inc	TJX	0.26	2.65
General Motors Company	GM	0.21	2.10
Target Corp	TGT	0.16	1.65
<b>Total</b>		<b>6.71</b>	<b>67.45</b>

*The two largest companies in the sector were Amazon and Home Depot...*

*...translating to S&P 500 weights of 2.93% and 0.92%, respectively.*

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Table is provided for illustrative purposes.

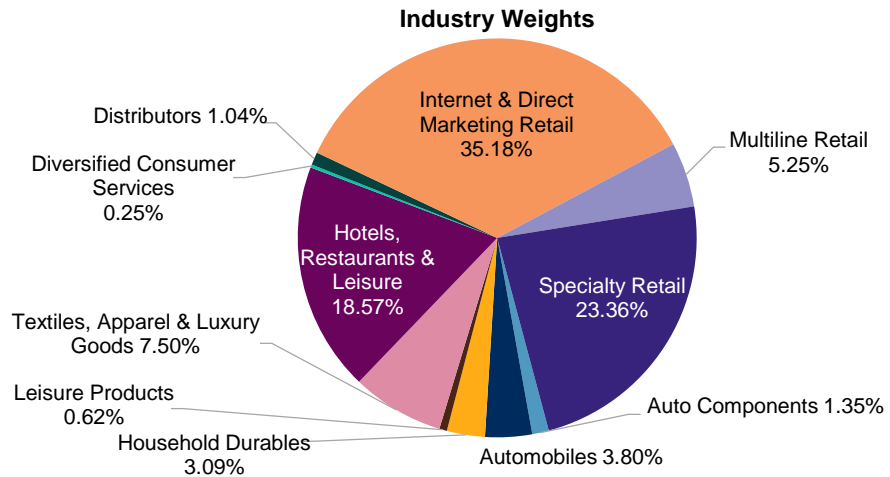
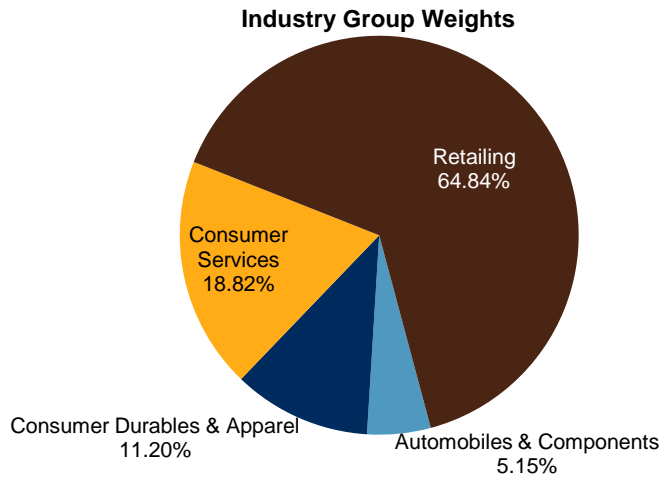
Within the S&P 500 Consumer Discretionary, Retailing was the heaviest of the four industry groups. As of Dec. 31, 2018, it was approximately 65% of the sector, Consumer Services was 19%, Consumer Durables & Apparel was 11%, and Automobiles & Components accounted for the remaining 5%. The two largest industries were Internet & Direct Marketing Retail (35%) and Specialty Retail (23%), both in the Retailing industry group.

On the sub-industry level, the heaviest weight was Internet & Direct Marketing Retail at 35.18%, consisting of retail service providers primarily on the Internet, through mail order, and TV home shopping. Also included were companies providing online marketplaces for consumer products and services, such as Amazon.com Inc. The second-heaviest weight was the Restaurants sub-industry at 12.84%, defined as owners and operators of restaurants, bars, pubs, fast-food and take-out facilities, and companies that provide food catering services. The largest company classified in the Restaurants sub-industry was McDonald's Corp (MCD). The third-heaviest sub-industry was Home Improvement Retail, at 12.83%, consisting of only two companies, Home Depot Inc and Lowe's Cos Inc (LOW).

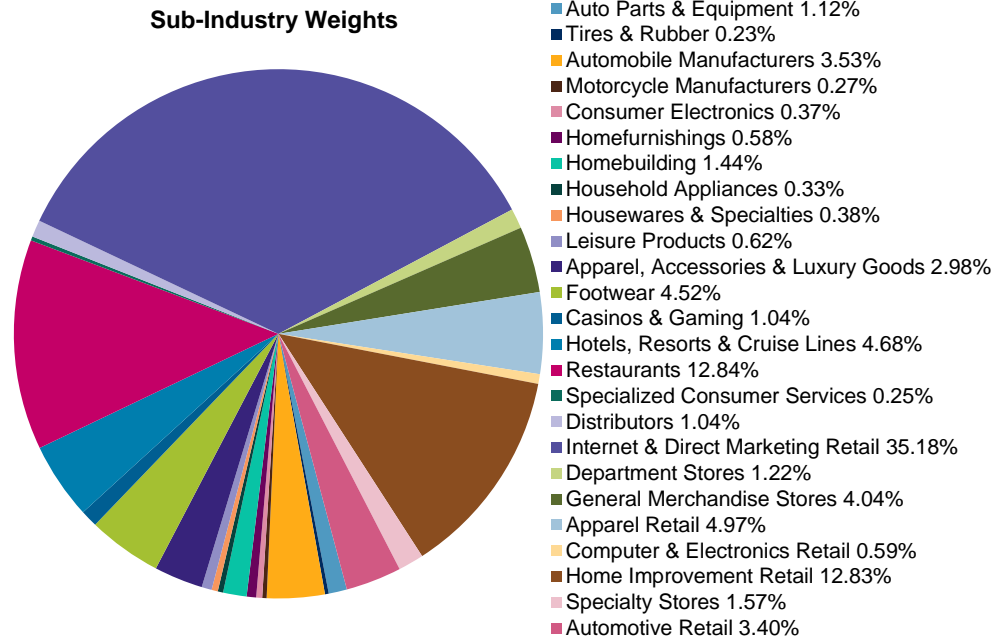
*Retailing had the heaviest of the four industry group weights, with approximately 65% of the sector.*

**Exhibit 4: Industry Group, Industry, and Sub-Industry Weights in the S&P 500 Consumer Discretionary**

*On the sub-industry level, the heaviest weight was Internet & Direct Marketing Retail at 35.18%...*



*...and the second was the Restaurants sub-industry at 12.84%*



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Charts are provided for illustrative purposes.

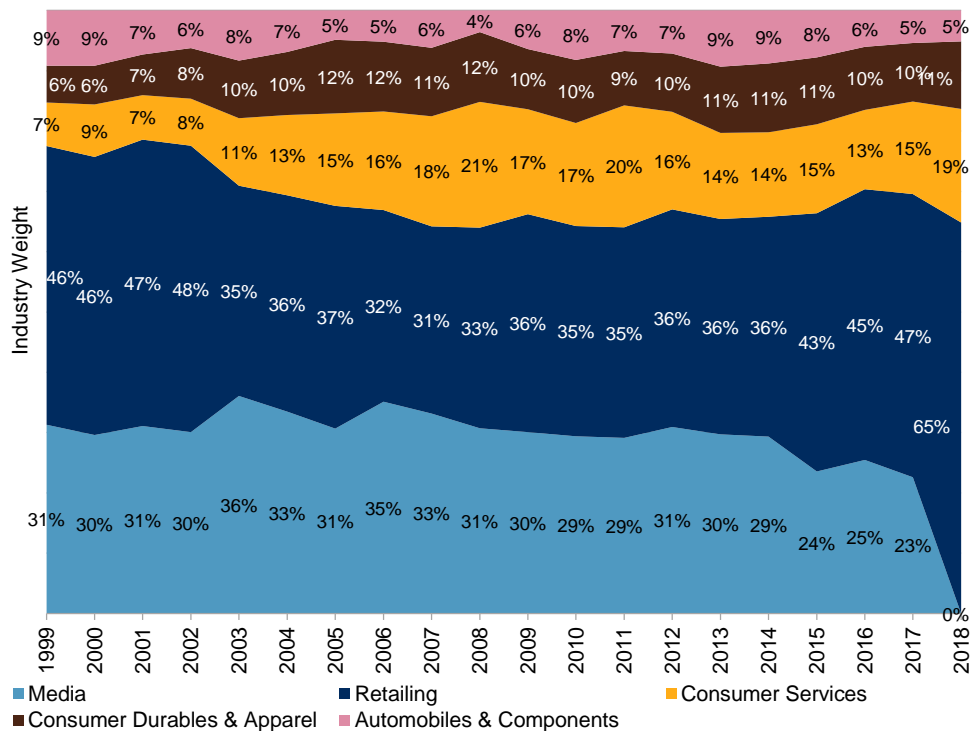
Since the development of GICS in 1999, the composition of the Consumer Discretionary sector has evolved.

A key feature of GICS is that it has the ability to evolve. Its structure is intended to reflect the current state of industries in the equity investment universe. Annual reviews are conducted by S&P Global and MSCI to ensure that the structure remains fully representative of the current global market. The distribution of industry weights within the Consumer Discretionary sector has been relatively stable. The most significant change occurred in September 2018, when the fifth industry group, Media, was moved from the Consumer Discretionary sector to the newly formed Communication Services sector. At that time, the Media industry group represented approximately 17% of the S&P 500 Consumer Discretionary and included companies such as Comcast Corp (CMCSA) and Walt Disney Co (DIS). Notably, even after the removal of the Media sub-industries, the Consumer Discretionary sector had 29 sub-industries remaining, which was still the most of any sector.

The most significant change occurred in September 2018...

...when the Media industry group was moved from Consumer Discretionary to the newly formed Communication Services.

**Exhibit 5: Industry Weights of the S&P 500 Consumer Discretionary**



Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1999, through Dec. 31, 2018. Chart is provided for illustrative purposes.

**FUNDAMENTALS**

The Consumer Discretionary sector has historically carried higher price-to-earnings (P/E) and price-to-book-value (P/BV) ratios than the broader market. In fact, as of Dec. 31, 2018, the S&P 500 Consumer Discretionary had the highest P/BV and second highest one-year forward P/E estimate among the 11 GICS sector indices. Also, the sector tends to have lower price-to-sales and dividend yield than its corresponding size benchmark (see Exhibit 6).

**Exhibit 6: Fundamental Data Comparison**

INDEX	12-MONTH TRAILING P/E	ONE-YEAR FORWARD P/E	P/BV	PRICE-TO-SALES	INDICATED DIVIDEND YIELD (%)
S&P 500	18.94	15.55	3.00	1.87	2.23
S&P 500 Consumer Discretionary	23.77	19.44	6.64	1.48	1.49
S&P MidCap 400	23.27	15.45	2.00	1.11	1.90
S&P MidCap 400 Consumer Discretionary	17.17	13.09	3.63	0.79	1.67
S&P SmallCap 600	36.24	17.11	1.81	0.84	1.76
S&P SmallCap 600 Consumer Discretionary	29.95	14.07	2.11	0.48	1.52

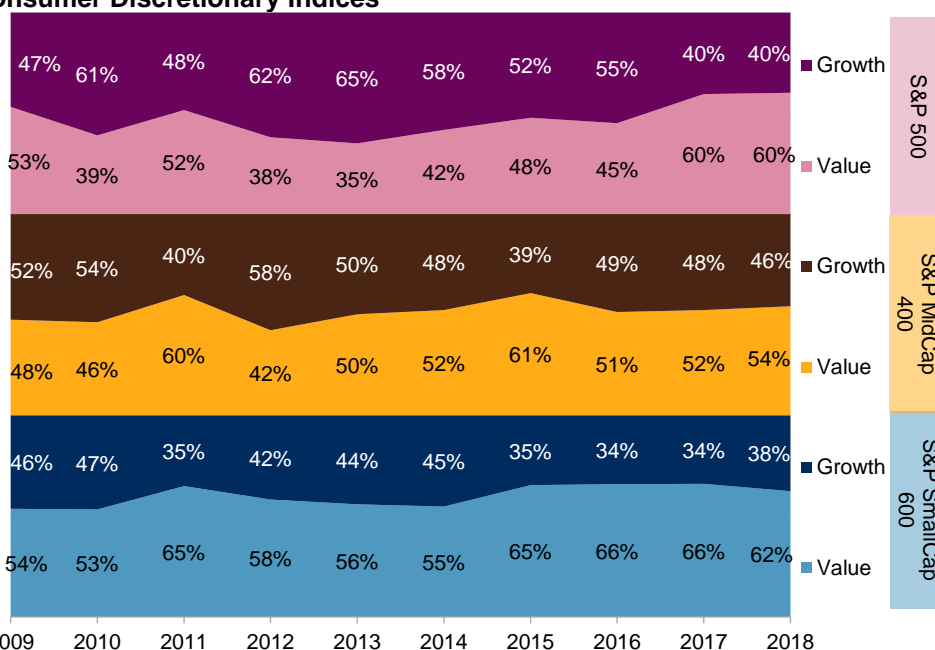
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

*The Consumer Discretionary sector tends to be mixed across growth and value...*

Consumer Discretionary sector companies tend to be historically mixed across growth and value, with some years tilted overall toward growth and other years toward value. For the 10-year period ending in 2018, large-cap Consumer Discretionary companies were tilted toward growth in six years, by as much as 65%, and four years toward value, by as much as 60% (see Exhibit 7). Mid-cap Consumer Discretionary companies tended to consistently be more evenly split across growth and value, while small-cap was tilted toward value in all 10 years between 2009 and 2018. As of Dec. 31, 2018, S&P 500 Consumer Discretionary companies averaged 60% value and 40% growth. The average was 54% value and 46% growth for Consumer Discretionary companies in the S&P MidCap 400 and 62% value and 38% growth in the S&P SmallCap 600.

**Exhibit 7: Growth and Value Factor Tilts of the Large-, Mid-, and Small-Cap Consumer Discretionary Indices**

*...averaging 60% value and 40% growth at the end of 2018.*

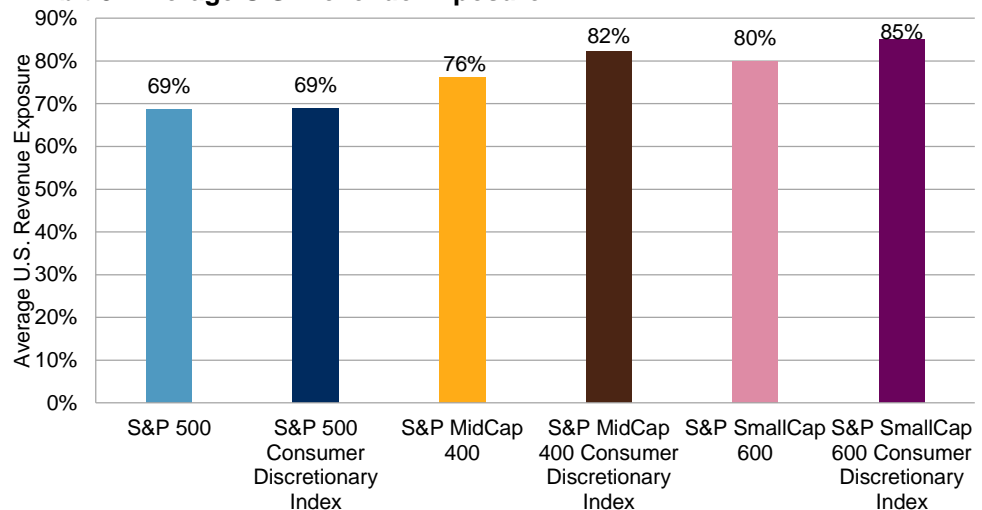


Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2009 through Dec. 31, 2018. Chart is provided for illustrative purposes.

*Over the past 10 years, Consumer Discretionary was one of the top performing of the 11 GICS sectors...*

Consumer Discretionary companies are approximately on par with the broader market as far as how insulated their revenue is from regions outside the U.S., according to data from the FactSet Geographic Revenue Exposure (GeoRev™) database. Generally, if international exposure is a goal, large-cap companies do the most global business. As of Dec. 31, 2018, S&P 500 Consumer Discretionary companies had an average U.S. revenue exposure of 69%. Mid- and small-cap Consumer Discretionary companies were more insulated from foreign markets, with averages of approximately 82% and 85%, respectively, of revenue sourced domestically (see Exhibit 8).

**Exhibit 8: Average U.S. Revenue Exposure**



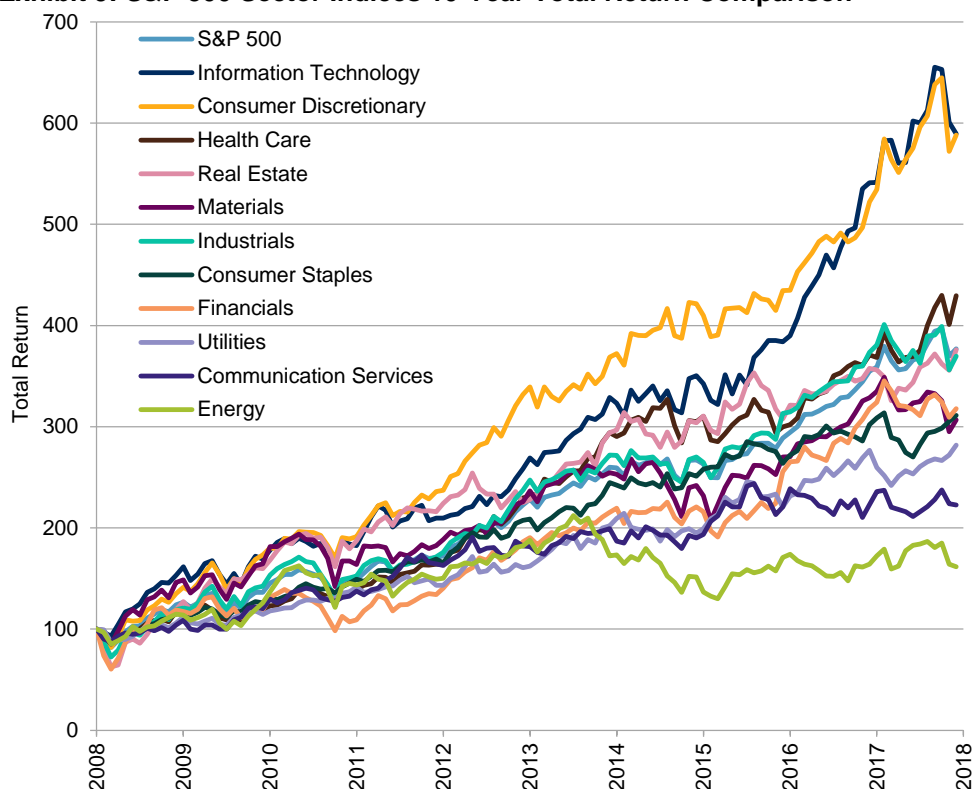
*...outperforming the S&P 500, with a 10-year annualized return of 18.35%, compared with the S&P 500's 13.12%.*

Source: S&P Dow Jones Indices LLC, FactSet GeoRev database. Data as of Dec. 31, 2018. Chart is provided for illustrative purposes.

## PERFORMANCE

Over the 10-year period ending in 2018, Consumer Discretionary was one of the top-performing of the 11 GICS sectors. The 18.35% 10-year annualized return was second best, narrowly behind the 18.36% return of Information Technology (see Exhibit 9). Consumer Discretionary outperformed the S&P 500, which as a whole had a 10-year annualized return of 13.12%. In terms of risk, defined by standard deviation and calculated based on the total returns of monthly values, Consumer Discretionary was the sixth highest. On a total return basis, the S&P 500 Consumer Discretionary offered a 10-year annualized risk-adjusted return of 1.11, which was the second best (see Exhibit 10).



**Exhibit 9: S&P 500 Sector Indices 10-Year Total Return Comparison**

On a total return basis, the S&P 500 Consumer Discretionary offered a 10-year annualized risk-adjusted return of 1.11.

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Indices rebased to 100 on Dec. 31, 2008. Performance based on total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

**Exhibit 10: Annualized Returns of S&P 500 Sector Indices**

INDEX NAME	1-YEAR	3-YEAR	5-YEAR	10-YEAR
<b>ANNUALIZED RETURN (%)</b>				
S&P 500 Consumer Discretionary	0.83	9.55	9.69	18.35
S&P 500	-4.38	9.26	8.49	13.12
S&P 500 Communication Services	-12.53	2.17	2.58	7.51
S&P 500 Consumer Staples	-8.38	3.09	6.26	10.96
S&P 500 Energy	-18.10	1.07	-5.56	3.50
S&P 500 Financials	-13.03	9.28	8.16	10.92
S&P 500 Health Care	6.47	8.14	11.12	14.65
S&P 500 Industrials	-13.29	7.65	5.95	12.68
S&P 500 Information Technology	-0.29	16.37	14.93	18.36
S&P 500 Materials	-14.70	7.22	3.84	11.07
S&P 500 Real Estate	-2.22	3.87	8.84	13.28
S&P 500 Utilities	4.11	10.72	10.74	10.46

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Risk is defined as standard deviation calculated based on total returns using monthly values. Performance based on total return in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

**Exhibit 10: Annualized Returns of S&P 500 Sector Indices (cont.)**

INDEX NAME	1-YEAR	3-YEAR	5-YEAR	10-YEAR
<b>RISK</b>				
S&P 500 Consumer Discretionary	19.89	13.58	13.69	16.54
S&P 500	15.33	10.95	10.94	13.60
S&P 500 Communication Services	13.60	15.90	14.40	14.54
S&P 500 Consumer Staples	15.13	11.39	11.35	11.32
S&P 500 Energy	23.75	18.71	18.95	19.33
S&P 500 Financials	16.57	16.46	14.69	21.95
S&P 500 Health Care	18.47	13.69	13.06	13.33
S&P 500 Industrials	20.11	14.59	13.53	18.11
S&P 500 Information Technology	18.65	15.29	14.53	16.10
S&P 500 Materials	15.36	14.51	15.34	19.50
S&P 500 Real Estate	14.46	13.01	13.08	21.48
S&P 500 Utilities	9.80	12.39	12.78	12.62
<b>ANNUALIZED RISK-ADJUSTED RETURNS</b>				
S&P 500 Consumer Discretionary	0.04	0.70	0.71	1.11
S&P 500	-0.29	0.85	0.78	0.96
S&P 500 Communication Services	-0.92	0.14	0.18	0.52
S&P 500 Consumer Staples	-0.55	0.27	0.55	0.97
S&P 500 Energy	-0.76	0.06	-0.29	0.18
S&P 500 Financials	-0.79	0.56	0.56	0.50
S&P 500 Health Care	0.35	0.59	0.85	1.10
S&P 500 Industrials	-0.66	0.52	0.44	0.70
S&P 500 Information Technology	-0.02	1.07	1.03	1.14
S&P 500 Materials	-0.96	0.50	0.25	0.57
S&P 500 Real Estate	-0.15	0.30	0.68	0.62
S&P 500 Utilities	0.42	0.86	0.84	0.83

*Consumer Discretionary has been most highly correlated with Industrials and least correlated with Utilities.*

*Outside of the U.S., the S&P 500 Consumer Discretionary was most highly correlated with the S&P Developed Ex-U.S. BMI.*

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Risk is defined as standard deviation calculated based on total returns using monthly values. Performance based on total return in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The Consumer Discretionary sector has been most highly correlated with Industrials and least correlated with Utilities. Exhibit 11 shows that as of Dec. 31, 2018, the S&P 500 Consumer Discretionary had a correlation of 0.89 with the [S&P 500 Industrials](#), based on 10 years of monthly returns. The correlation was 0.24 with the [S&P 500 Utilities](#). Correlation with other major country indices also varied. Outside of the U.S., the S&P 500 Consumer Discretionary was most highly correlated with the [S&P Developed Ex-U.S. BMI](#) (0.79) and S&P Germany BMI (0.78). It was least correlated with the [S&P China BMI](#) (0.59).

**Exhibit 11: Correlations of the S&P 500 Consumer Discretionary**

S&P 500 SECTOR (TR)	CORRELATION	INDEX (TR)	CORRELATION
Industrials	0.89	S&P Developed Ex-U.S. BMI	0.79
Materials	0.83	S&P Germany BMI	0.78
Information Technology	0.83	S&P Global Ex-U.S. BMI	0.78
Financials	0.80	S&P United Kingdom BMI	0.74
Real Estate	0.70	S&P France BMI	0.73
Health Care	0.67	S&P Australia BMI	0.70
Energy	0.63	S&P Canada BMI	0.70
Consumer Staples	0.62	S&P Switzerland BMI	0.69
Communication Services	0.47	S&P Korea BMI	0.68
Utilities	0.24	S&P Emerging BMI	0.66
		S&P Japan BMI	0.61
		S&P China BMI	0.59
		S&P United States BMI	0.93
		S&P 500	0.92
		S&P MidCap 400	0.91
		S&P Developed BMI	0.88
		S&P SmallCap 600	0.87
		S&P Global BMI	0.87

*The S&P 500 Consumer Discretionary was least correlated with the S&P China BMI*

Source: S&P Dow Jones Indices LLC. Correlations based on monthly total return data from January 2009 to December 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Performance of various industry group, industry, and sub-industry buckets within the Consumer Discretionary sector can vary. These groupings, based on qualitative and quantitative factors, are increasingly more specific to the types of companies included. Exhibit 12 shows the annualized returns of the company groupings within the Consumer Discretionary sector.

**Exhibit 12: Annualized Returns of the S&P 500 Consumer Discretionary GICS Subindices**

INDEX	ANNUALIZED RETURN (%)			
	1-YEAR	3-YEAR	5-YEAR	10-YEAR
S&P 500 Consumer Discretionary	0.83	9.55	9.69	18.35
<b>INDUSTRY GROUP</b>				
S&P 500 Automobiles & Components	-26.01	-4.02	-3.33	13.16
S&P 500 Consumer Durables & Apparel	-11.96	-0.56	1.30	13.06
S&P 500 Consumer Services	-1.43	10.58	10.88	15.23
S&P 500 Retailing	13.46	16.10	16.91	22.92
<b>INDUSTRY</b>				
S&P 500 Auto Components	-29.45	-1.71	-0.72	12.09
S&P 500 Automobiles	-24.66	-4.60	-4.41	14.91
S&P 500 Household Durables	-34.18	-5.69	-0.09	13.78
S&P 500 Leisure Products	-17.31	-6.69	-7.81	6.17
S&P 500 Textiles, Apparel & Luxury Goods	2.65	2.44	2.98	14.69
S&P 500 Hotels Restaurants & Leisure	-1.46	10.89	11.06	16.56
S&P 500 Diversified Consumer Services	0.52	-5.28	0.38	-3.11
S&P 500 Distributors	-17.93	1.63	2.70	11.63
S&P 500 Internet & Direct Marketing Retail	26.65	26.75	26.26	40.18
S&P 500 Multiline Retail	6.08	5.86	5.21	11.84
S&P 500 Specialty Retail	-0.27	7.53	11.07	18.52
<b>SUB-INDUSTRY</b>				
S&P 500 Auto Parts & Equipment	-27.93	1.31	0.34	12.26
S&P 500 Tires & Rubber	-35.37	-13.15	-1.79	13.85
S&P 500 Automobile Manufacturers	-24.16	-4.48	-3.72	16.68
S&P 500 Motorcycle Manufacturers	-30.52	-6.21	-10.87	9.52
S&P 500 Consumer Electronics	9.83	19.46	11.83	20.56
S&P 500 Home Furnishings	-48.40	-10.70	-1.09	9.76
S&P 500 Homebuilding	-32.25	2.32	5.32	13.78
S&P 500 Household Appliances	-34.50	-7.58	-5.15	12.48
S&P 500 Housewares & Specialties	-37.52	-23.11	-8.47	9.99
S&P 500 Leisure Products	-17.31	-6.69	-7.81	7.08
S&P 500 Apparel, Accessories & Luxury Goods	-15.76	-3.44	-7.07	9.76
S&P 500 Footwear	19.86	7.14	14.87	20.88
S&P 500 Casinos & Gaming	-32.99	14.32	-11.43	7.56
S&P 500 Hotels, Resorts & Cruise Lines	-18.06	9.51	11.10	18.10
S&P 500 Restaurants	10.57	12.71	13.24	17.03
S&P 500 Specialized Consumer Services	0.52	-5.28	0.47	4.76
S&P 500 Distributors	-17.93	1.63	2.70	11.63
S&P 500 Internet & Direct Marketing Retail	26.65	26.75	26.26	40.18
S&P 500 Department Stores	19.34	6.00	-1.05	9.48
S&P 500 General Merchandise Stores	2.57	5.82	7.89	12.51
S&P 500 Apparel Retail	1.84	3.93	6.33	21.49
S&P 500 Computer & Electronics Retail	-20.60	24.81	7.85	10.28
S&P 500 Home Improvement Retail	-5.11	10.73	17.46	22.43
S&P 500 Specialty Stores	-2.41	-0.55	-1.71	3.17
S&P 500 Automotive Retail	27.64	5.85	12.73	21.42

*The S&P 500 Consumer Discretionary had a 10-year annualized return of 18.35%.*

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## CONCLUSION

*Consumer Discretionary was not only the fifth largest of the 11 GICS sectors in the U.S. market...*

*...but it also had the second-best 10-year annualized return of the 11 GICS sector indices.*

As of Dec. 31, 2018, the S&P 500 Consumer Discretionary had the second-best 10-year annualized return of the 11 GICS sector indices. Consumer Discretionary was the fifth largest of the 11 GICS sectors in the U.S. market and accounted for approximately 10% of the weight of the S&P 500. Within the sector, Retailing has historically been the highest-weighted industry group, with Internet & Direct Marketing Retail the largest industry and sub-industry. Amazon.com Inc was the largest Consumer Discretionary company—over three times larger than the second largest. In the mid- and small-cap segments, Consumer Discretionary was the third heaviest-weighted sector, at 12% and 14%, respectively. A closer look at the sector's characteristics provides further insights into the investment profile. Companies from the Consumer Discretionary sector on average were tilted toward value as of Dec. 31, 2018. Historically, they tended to vary between growth and value, with large caps tilting toward growth 6 of the preceding 10 years, mid caps more evenly split between growth and value, and small caps consistently maintaining a tilt towards value. The sector has foreign revenue exposure similar to the broader market benchmarks. Additionally, Consumer Discretionary has varying correlations with different sectors and countries, with highest correlations to the Industrials sector and Germany, respectively.

## PERFORMANCE DISCLOSURE

The S&P 500 Real Estate was launched September 19, 2016. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. Complete index methodology details are available at [www.spdji.com](http://www.spdji.com). Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown.

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The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at [www.spdji.com](http://www.spdji.com) for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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