Syntax

Know What You Own: Investing in the Power of the Consumer?

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What lies beneath the XLY

- **The S&P 500 Consumer Discretionary Select Sector ETF (XLY) is largely driven by two companies, Amazon and Tesla,** which make up a third of the weight and account for half of the risk.

- **Neither Amazon nor Tesla is representative of the consumer discretionary sector**. Amazon is more correlated with the tech sector than the consumer sector, and Tesla is concentrated on a single product category and not representative of the sector as a whole.

- **Syntax's Stratified Consumer Index more accurately captures the growth of the entire consumer sector,** allocating weight evenly across only those companies with direct ties to consumer products. This was highlighted in November when the average consumer stock rose 8.8% and the Stratified Consumer Index rose 11.0%. In contrast, the XLY only gained 0.9% due to the poor performance of Tesla (-14.8%) and Amazon (-6.6%)

Exhibit 1: S&P 500 Consumer Discretionary Select Sector ETF (XLY) – Contribution to Risk (%)
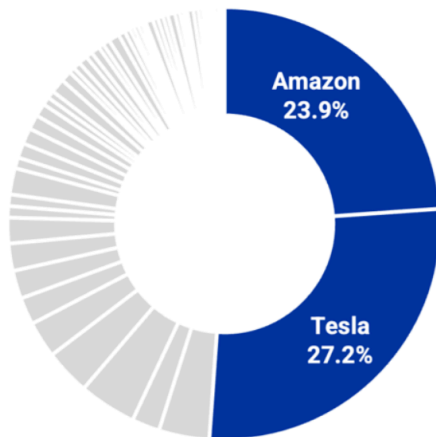
Amazon: 50% revenues generated outside of the Consumer Discretionary sector

Tesla: Represents a single product line rather than the broad sector

Source: Bloomberg as of 31 December 2022.

The XLY tracks the S&P 500 Consumer Discretionary Select Sector Index which allocates weight relative to the market caps of those stocks in the S&P 500 that the Global Industry Classification Standard (GICS) classifies as Consumer Discretionary companies. A key selling point of the XLY is to enable investors to capture and benefit from the growth and prospects of the overall consumer discretionary sector. While the fund is widely owned (the ninth largest sector ETF at $14 bn as of 30 September 2022), investors may not fully appreciate their actual sector exposures when they allocate to the XLY.

The ten largest holdings of the XLY are shown in Exhibit 2 below. In aggregate, these ten positions comprise 66.3% of the portfolio weight, with the largest two holdings, Amazon, and Tesla accounting for 34.3%.

Exhibit 2: Concentration Problem – Ten Largest Holdings of XLY

Company	Weight	Contribution to Risk	Syntax Core Business Risk
Amazon	**18.7%**	**23.9%**	**Information**
Tesla	**15.6%**	**27.2%**	**Consumer Products**
Home Depot	5.4%	3.8%	Consumer Products
McDonald's	5.3%	2.1%	Food
Nike	4.6%	4.3%	Consumer Products
Lowe's Cos.	4.5%	3.4%	Consumer Products
Starbucks	3.9%	2.7%	Food
TJX Companies	3.1%	2.0%	Consumer Products
Booking Holdings	2.7%	2.1%	Information
Target	2.6%	2.0%	Consumer Products
	66.3%	**73.5%**	

The top 10 stocks account for 66% of the weight and 74% of the risk

Source: Syntax, Bloomberg as of 31 December 2022.

Exhibit 3: Amazon and Tesla are 35% of the weight and 50% of the risk of XLY
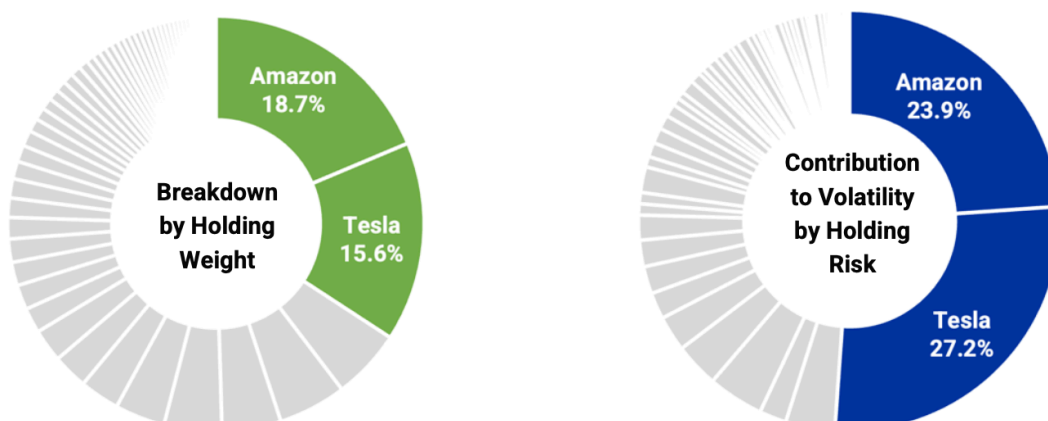
Source: Syntax, Bloomberg as of 31 December 2022. Risk is measured as contribution to portfolio volatility.

While a 34% weight in only two positions is highly concentrated for a sector ETF, the concentration problem is further compounded due to Amazon and Tesla's above average volatility. Amazon has an annualized volatility of 49.9%, whileTesla's is even higher at 66.2%. Both stock's annualized volatility is significantly higher than the 43.9% average volatility for the consumer discretionary sector.When large portfolio weights are allocated to highly volatile stocks, those stocks account for a greater percentage of the portfolio's daily volatility. In the case ofXLY, Amazon and Tesla account for approximately 50% of the ETF's risk.

XLY's over reliance on two companies becomes more problematic, given that neither Amazon nor Tesla are representative of the whole consumer discretionary sector. We leveraged the granular data in Syntax's Affinity platform to analyzeAmazon's product line classifications and the percentage of associated revenue of each (Exhibit 4). Only 47.5% of sales come from Amazon's online stores. The other half of its revenues were generated mostly from platform fees, subscription services, marketing and multimedia, which are not as strongly related to consumer discretionary business risks.

Exhibit 4: Amazon's Product Line Classifications (by Associated Revenues)

Product Line	2021	2020	2019	2018	2017
Diversified Consumer Goods Online Retail	47.5%	54.1%	53.0%	55.2%	62.6%
Online Sales Platform for Businesses & Consumers	22.1%	22.1%	20.2%	19.2%	18.4%
Diversified Cloud Computing	13.3%	12.4%	13.1%	11.5%	10.1%
Diversified Consumer Media Distributor; Online	6.8%	6.9%	7.2%	6.4%	5.6%
Digital Marketing Services	6.7%	--	--	---	---
Groceries	3.7%	4.5%	6.5%	7.7%	3.3%

Source: Syntax Affinity®, Bloomberg as of 31 December 2022. 2022 revenue data has not yet been released.

In Tesla's case, as a manufacturer of luxury automobiles, it is easier for the company to be classified and treated as a consumer discretionary stock with 82% of its revenues derived from direct electric vehicle sales (Exhibit 5). However, the narrow nature of the product category (e.g., electric vehicles as a relatively small percentage of total vehicle sales in the US) means that Tesla is not representative of the entire consumer discretionary sector. Instead, its share price is largely driven by the idiosyncratic nature of its business and its management team, which is reflected in its valuation. Automobiles as a business line represent 16.2% of the consumer discretionary sector, of which Tesla is 12.8 percentage points or 79% of the total weight. As reference point, the weight of Ford and GM in the index are 1.7% and GM 1.8%, respectively, even though both companies' revenues exceed Tesla's.

**Exhibit 5: Tesla's Product Line Classifications (by Associated Revenues)**

Product Line	2021	2020	2019	2018	2017
Electric Automobiles - Sold Directly	**82.0%**	83.0%	81.2%	82.2%	82.2%
Car Repair	**7.1%**	7.3%	9.1%	6.5%	6.5%
Rechargeable Batteries	**5.2%**	6.3%	6.2%	7.2%	7.2%
Car Lessor	**3.1%**	3.3%	3.5%	4.1%	4.1%
Renewable Energy Credit Trading	**2.7%**	-	-	-	-

Source: Syntax Affinity®, Bloomberg as of 31 December 2021. 2022 revenue data has not yet been released.

As shown is Exhibit 6, the market views and treats Amazon more like the average information technology company than the average consumer discretionary stock. Amazon's correlation with the S&P 500 Equal Weighted Consumer Discretionary Index (RCD) is 0.50, whereas the correlation with the S&P 500 Equal Weighted Information Technology Index is 0.67. In other words, Amazon is not particularly representative of consumer discretionary risks, yet it still accounts for 18.7% of the XLY's weight and 23.9% of its risk.

We see a similar case with Tesla, which has a relatively low correlation of 0.45 with the S&P 500 Equal Weighted Consumer Discretionary Index (Exhibit 6) and approximately the same correlation of 0.40 with the S&P 500 Equal Weighted Information Technology Index.

Exhibit 6: Correlation of Amazon and Tesla with GICS Sector Indices
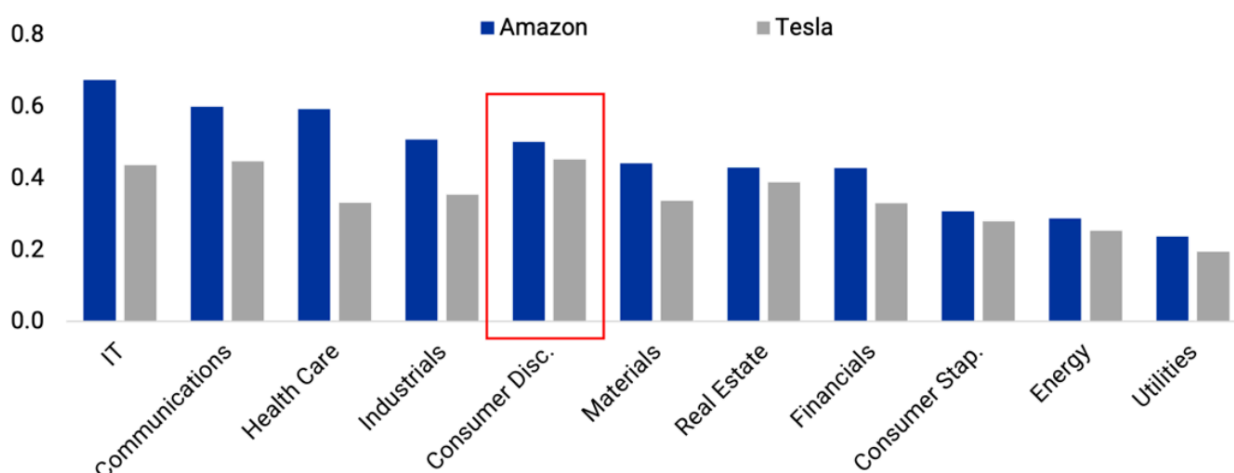
Source: Syntax, Bloomberg as of 31 December 2022. Correlation calculated using 60monthly returns of the S&P 500

Therefore, it is evident that Amazon and Tesla, the largest two positions in the XLY, which make up approximately half of the ETF's daily movements, are not representative of the consumer discretionary sector. This is far from ideal for investors that wish to get exposure to the sector by allocating to XLY.

In November 2022, the average stock in the S&P 500 Consumer Discretionary sector rose 8.5%. In other words, it was a stellar month for consumer stocks — however, the XLY only rose by approximately 1.0%. The primary reason was that the ETF's performance was dragged down by Tesla and Amazon, which fell 14.8% and 6.6%, respectively in November. These two stocks not only created a significant headwind for performance of the overall portfolio, but their relatively larger weightings also outsized the rest of the ETF's holdings, many which recorded very strong returns in November.

As an alternative, the Syntax Stratified Consumer Index addresses the risk concentration issues inherent in the XLY by allocating exposure equally to each consumer segment. The result is an index which is representative of all the business opportunities in the consumer sector. The effectiveness of the Stratified Consumer Index to capture the performance of all consumer stocks was highlighted by its 11.0% return in November 2022 (Exhibit 7).

Exhibit 7: S&P 500 Consumer Discretionary Index vs Syntax Stratified Consumer Index
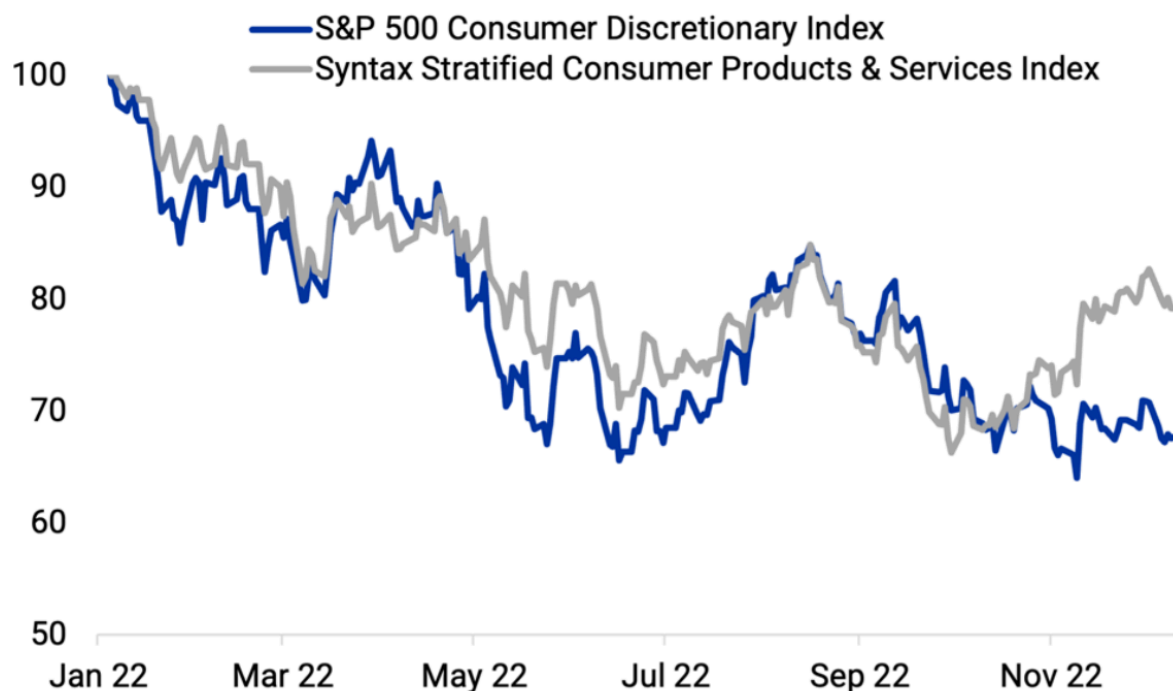
Source: Syntax, Bloomberg. Total Return Indices as of 31 December 2022.