

# Introducing the S&P 500<sup>®</sup> 3% Capped Index: Tracking U.S. Equities with a Focus on Lower Concentration

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## Introduction

The S&P 500 is widely regarded as the premier gauge of the large-cap segment of the U.S. equity market. While the index's global relevance remains, current market trends may raise concerns about increased concentration in this segment. To address these concerns while offering a comparable index, S&P Dow Jones Indices (S&P DJI), the world's leading index provider, recently launched the [S&P 500 3% Capped Index](#). This index measures the benchmark S&P 500 but imposes capped weights on the index constituents.

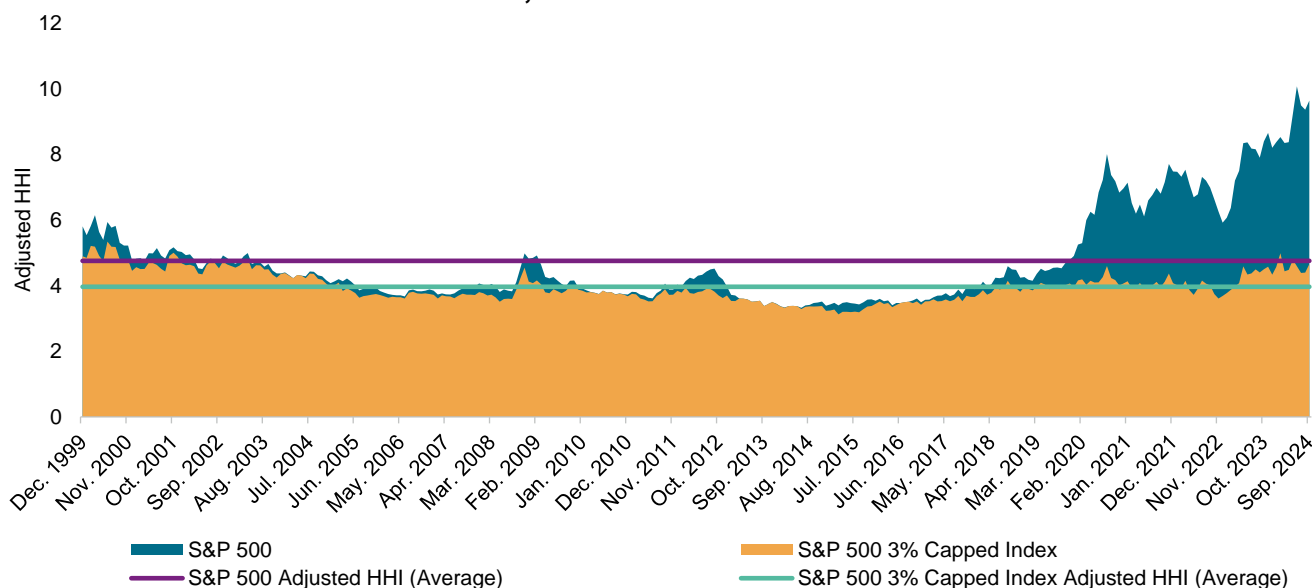
## Methodology Overview: The Capping Mechanism

The S&P 500 3% Capped Index's universe is S&P 500 constituents, but the index imposes a cap weight of 3% on each company at every quarterly rebalancing. The process is straightforward: if any company breaches the cap at rebalancing, its weight is reduced to 3%, and any excess weight is redistributed proportionally among all uncapped companies. This process is repeated iteratively until no company exceeds the cap.

# Index Sector Weights and Stock Concentration Relative to the Headline S&P 500

As a direct result of the 3% company cap, the index exhibits different weights at the stock and sector levels. If stock concentration in the S&P 500 rises, the index will be overweight or underweight in different sectors relative to its benchmark index. Using the adjusted HHI<sup>1</sup> as a metric to measure concentration—the higher the adjusted HHI, the higher the concentration—Exhibit 1 shows that concentration levels have been stable for the S&P 500 3% Capped Index but have been increasing for the S&P 500, with levels significantly above the historical average.

**Exhibit 1: Over the Past Five Years, the Difference in Concentration Levels Has Widened**

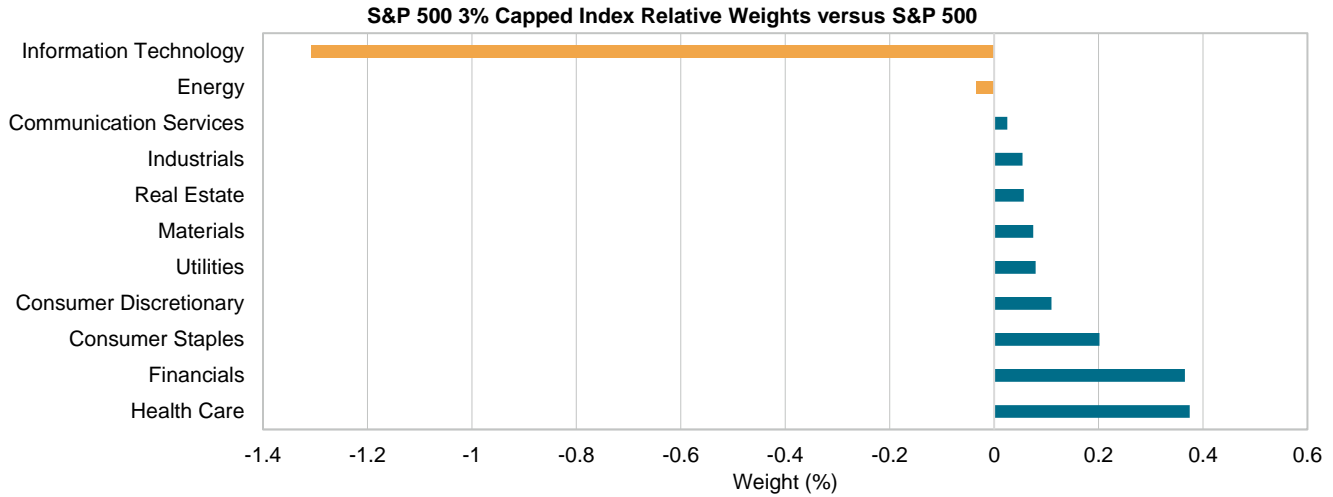


Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1999, to Sep. 30, 2024. The S&P 500 3% Capped Index was launched April 19, 2024. All data prior to such date is back-tested hypothetical data. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects 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.

What is the impact on sector weights? Exhibit 2 illustrates the index's monthly average relative weights compared to the S&P 500. Unsurprisingly, the S&P 500 3% Capped index has historically been underweight in Information Technology by an average of 1.3%. However, over the past five years, this underweight has increased to an average of 5.5% relative to the S&P 500. The excess weight has primarily been concentrated in the Health Care, Financials and Consumer Staples sectors.

<sup>1</sup> The Herfindahl-Hirschman Index (HHI) is a commonly used measure of concentration, calculated as the sum of squared index constituent's percentage weights. The adjusted HHI is defined as the index HHI divided by the HHI of an equally weighted portfolio with the same number of stocks.

## Exhibit 2: Relative to the S&P 500, the S&P 500 3% Capped Index Is Mainly Underweight in Information Technology

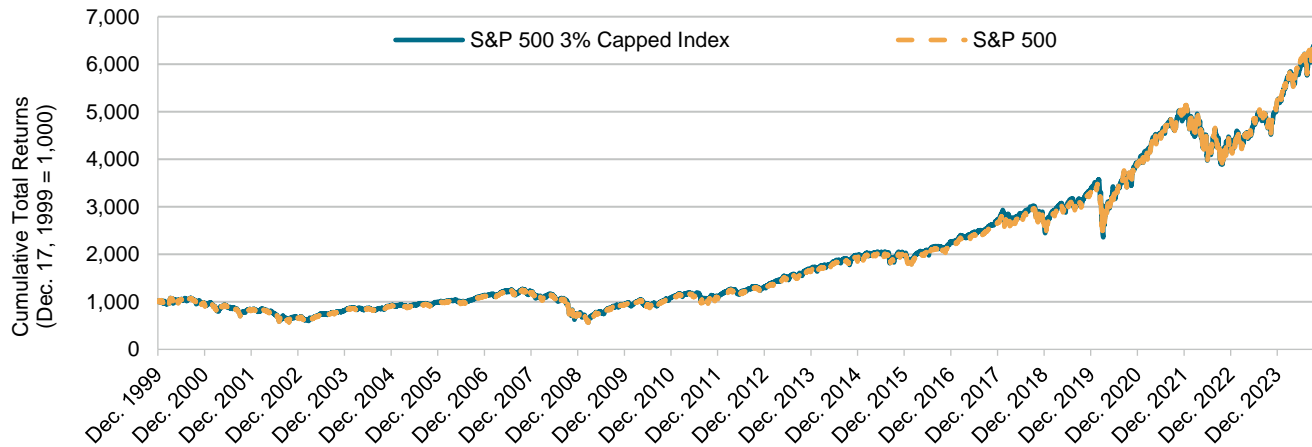


Source: S&P Dow Jones Indices LLC. Data based on year-end data between December 1999 and December 2023, including September 2024. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. Chart is provided for illustrative purposes and reflects hypothetical historical data. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

## Absolute and Relative Performance

In terms of long-term cumulative index performance, despite having different sector weights, primarily in Information Technology, the S&P 500 3% Capped Index has closely followed the benchmark, as shown in Exhibit 3. The long-term annualized tracking error was relatively low, at 0.7%, while the index performance difference was 0.03% over the back-tested period ending September 2024.

### Exhibit 3: S&P 500 3% Capped Cumulative Index Performance



Source: S&P Dow Jones Indices LLC. Data from Dec. 17, 1999, to Sept. 30, 2024. Index performance based on daily total returns in USD. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. 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.

Moreover, as Exhibit 4 shows, both indices displayed similar risk-adjusted returns across different time periods, with slightly higher differences over shorter durations. The largest difference comes from the 3-5-year period, when market concentration started to rise, as previously explained.

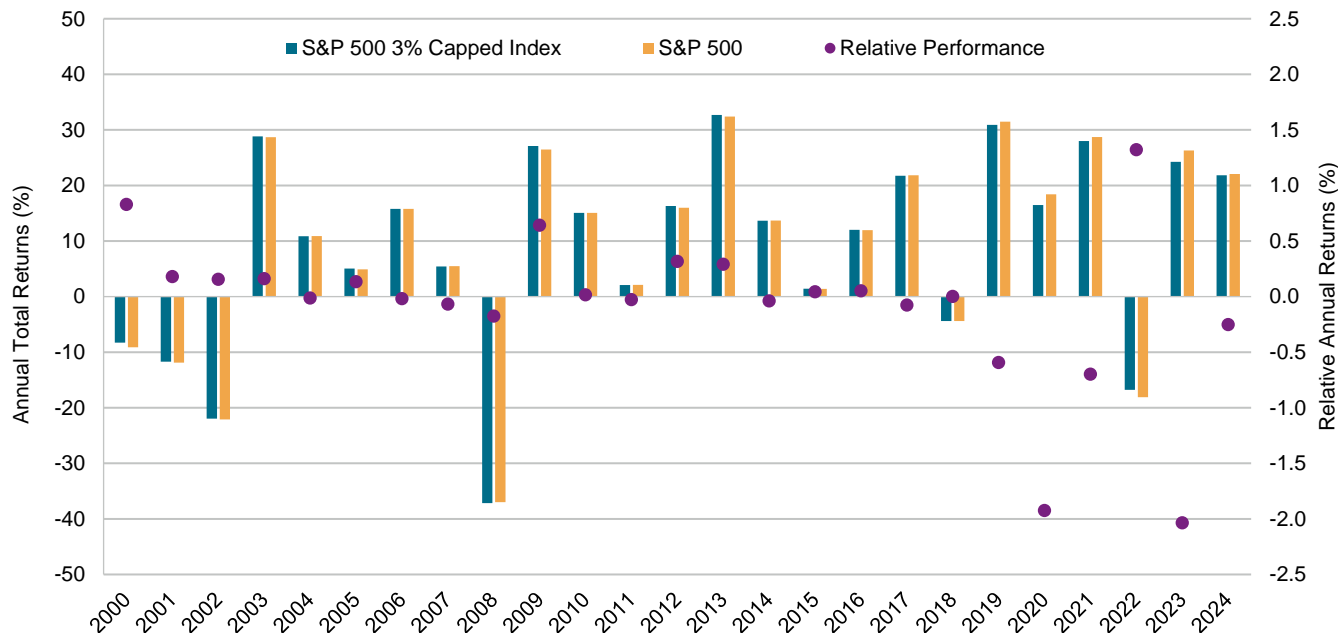
#### Exhibit 4: The S&P 500 3% Capped Index and the S&P 500 Have Had Similar Risk/Performance Profiles

Category	S&P 500 3% Capped Index	S&P 500	S&P 500 3% Capped Index Less S&P 500
<b>Annualized Return (%)</b>			
YTD	21.83	22.08	-0.25
1-Year	35.65	36.35	-0.70
3-Year	11.60	11.91	-0.31
5-Year	15.36	15.98	-0.62
10-Year	13.05	13.38	-0.32
20-Year	10.59	10.71	-0.12
Since Dec. 17, 1999	7.79	7.82	-0.03
<b>Annualized Volatility (%)</b>			
3-Year	17.02	17.59	-0.57
5-Year	20.92	21.26	-0.34
10-Year	17.64	17.86	-0.22
20-Year	19.06	19.16	-0.09
Since Dec. 17, 1999	19.34	19.44	-0.09
<b>Risk-Adjusted Return</b>			
3-Year	1.28	1.26	0.03
5-Year	1.70	1.71	-0.01
10-Year	0.87	0.89	-0.02
20-Year	0.68	0.70	-0.01
Since Dec. 17, 1999	0.55	0.55	0.00
<b>Annualized Tracking Error (%)</b>			
3-Year	1.59	-	-
5-Year	1.50	-	-
10-Year	1.07	-	-
20-Year	0.77	-	-
Since Dec. 17, 1999	0.71	-	-

Source: S&P Dow Jones Indices LLC. Data from Dec. 17, 1999, to Sept. 30, 2024. Index performance based on daily total returns in USD. YTD returns are not annualized. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. 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 inherent limitations associated with back-tested performance.

To further illustrate this, Exhibit 5 shows the year-over-year back-tested performance from 2019 through YTD 2024. The S&P 500 3% Capped Index outperformed the S&P 500 in 2022 by 1.3% but faced challenges in other years, particularly in 2020 and 2023, when the index underperformed the benchmark by an average of 2%.

**Exhibit 5: Widening Concentration Levels since 2019 Have Led to Greater Performance Differences**



Source: S&P Dow Jones Indices LLC. Data from Jan. 3, 2000, to Sept. 30, 2024. Index performance based on total returns in USD. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. 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 inherent limitations associated with back-tested performance.

## Index Characteristics

Due to the quarterly frequency of the company capping, it can be expected that the S&P 500 3% Capped Index may exhibit higher annual turnover figures compared to the S&P 500. As shown in Exhibit 6, while turnover figures increased, they have historically remained relatively low; this highlights the tradeoff between slightly higher transaction costs and reduced company concentration risk.

## Exhibit 6: The S&P 500 3% Capped Index Typically Had Higher Turnover, Yet It Remains Relatively Low

Year	Index One-Way Turnover (Weight)	
	S&P 500 3% Capped Index (%)	S&P 500 (%)
2000	16.1	8.9
2001	9.0	4.4
2002	7.5	3.8
2003	3.9	1.5
2004	6.1	3.1
2005	8.8	5.7
2006	6.8	4.5
2007	9.1	5.2
2008	9.3	3.9
2009	8.2	4.5
2010	6.1	3.7
2011	5.3	3.6
2012	7.2	4.4
2013	4.4	3.3
2014	5.2	3.0
2015	5.6	3.6
2016	5.6	4.7
2017	4.4	3.8
2018	5.7	4.8
2019	5.8	4.3
2020	8.1	4.2
2021	5.1	2.8
2022	5.0	2.8
2023	5.4	2.6
2024	7.0	2.1
<b>Average</b>	<b>6.8</b>	<b>4.0</b>

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1999, to Sept. 30, 2024. Index performance based on daily total returns in USD. YTD returns are not annualized. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. 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 inherent limitations associated with back-tested performance.

One of the key inclusion criteria in the S&P 500 methodology is the earnings screen, which requires new constituents to have a history of positive earnings. Specifically, the sum of the most recent four consecutive quarters' earnings must be positive, including the most recent quarter. This earnings screen results in a significant positive exposure to the quality factor, as demonstrated by a four-factor model based on the Fama-French Three Factor Model plus a quality-minus-junk (QMJ)<sup>2</sup> factor. Over a 24-year period, the S&P 500 3% Capped Index maintained the positive quality factor of the S&P 500, as demonstrated in Exhibit 7. Additionally, the index also exhibited an increase in the value factor, by assigning less weight to larger companies and more weight to smaller ones, thereby tilting toward companies with “cheaper” valuations.

### Exhibit 7: The S&P 500 3% Capped Has Significant Positive Quality and Value Characteristics

Factor	S&P 500 3% Capped Index			S&P 500		
	Coefficient	Standard Error	T-Statistic	Coefficient	Standard Error	T-Statistic
Intercept	-0.02	0.02	-0.81	-0.02	0.02	-0.80
Market	1.00	0.01	169.43	1.00	0.01	192.76
Size	-0.15	0.01	-19.55	-0.16	0.01	-23.58
<b>Value</b>	<b>0.05</b>	<b>0.01</b>	<b>7.68</b>	<b>0.02</b>	<b>0.01</b>	<b>4.57</b>
<b>Quality</b>	<b>0.03</b>	<b>0.01</b>	<b>3.23</b>	<b>0.04</b>	<b>0.01</b>	<b>4.22</b>
Adjusted R <sup>2</sup>	0.99			0.99		

Source: S&P Dow Jones Indices LLC, Ken French, AQR. Data from Dec. 31, 1999, to Sept. 30, 2024. Index performance based on daily total returns in USD. YTD returns are not annualized. The S&P 500 3% Capped Index was launched April 19, 2024. All information prior to such date is back-tested hypothetical data. 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 inherent limitations associated with back-tested performance.

## Conclusion

The S&P 500 3% Capped Index offers a measurement of the performance of the large-cap U.S. equity market while seeking to address high stock concentration levels. Historically, this index has exhibited similar characteristics to its benchmark and is based on a transparent and rules-based methodology.

<sup>2</sup> Asness, Clifford S., Andrea Frazzini, and Lasse Heje Pedersen, “Quality minus junk,” *Review of Accounting Studies*, 2019, 24, pp. 34-112.

## Performance Disclosure/Back-Tested Data

The S&P 500 3% Capped Index was launched on April 19, 2024. 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.spglobal.com/spdji](http://www.spglobal.com/spdji). Past performance of the Index is not an indication of future results. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results. Please refer to the methodology for the Index 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. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

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