# HOW TO INCREASE DIVERSIFICATION IN PORTFOLIOS WHEN MARKET CAP INDICES FAIL

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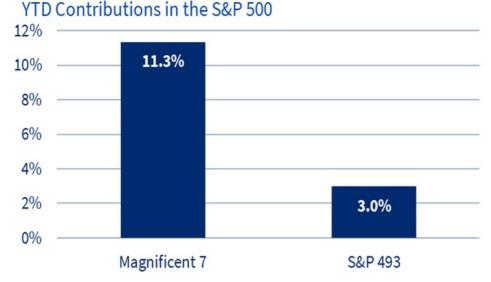
After a dismal 2022, equity markets have rebounded quite strongly in 2023 lifted by artificial intelligence (AI), the slowdown of interest rate hikes, and improving inflation prints. However, this rebound has surprised by its lack of breadth. Market-cap weighted stock indices' overconcentration around the world, and in particular in the US, has been a continuous issue for the last few years but 2023 stands out for the acuteness of the issue.

The S&P 500 has been living and dying by the 'Magnificent 7'

The negative performance of equity markets in 2022 was already driven mostly by tech stocks.

The negative impact of increasing interest rates, slowing growth, and reduced spending in IT on tech stocks (in particular, on Apple, Microsoft, Amazon, Alphabet, Meta, Nvidia and Tesla (the 'Magnificent 7')) impacted the market performance. With the S&P 500 down 18.1%, those 7 stocks combined contributed around -11% In 2023, the concentration of return is even more acute with 11.3% out of the 14.3% performance of the S&P 500.

Figure 1: Contribution of the Magnificent 7 year-to-date (YTD) in the S&P 500



Source: WisdomTree, Bloomberg. 31 December 2022 to 15 September 2023 in USD. Historical performance is not an indication of future performance and any investments may go down in value.



This year, the concentration was so acute that Nasdaq had to perform an exception rebalancing in July to reallocate some of the weight in the Nasdaq 100 away from those stocks.

# Index concentration: a long time in the making

Looking at the top holdings in an index gives a good idea of the concentration in the portfolio. However, a more systematic way to assess this concentration across different indices is to compare the 'effective number of stocks' in the index compared to the full number of stocks in the index.

The effective number of stocks quantifies how many independent stocks would provide the same level of diversification as the index and is calculated as:

$$Breadth = \frac{1}{\sum_{1}^{n} w_i^2}$$

where n is the number of stocks in the index w is the weight of each stock in the index

Concentration is then derived as

$$Concentration = 1 - \frac{Breadth}{n}$$

Taking the example of a three stocks index with weights of 50%, 30% and 20%, the Breadth would be  $\frac{1}{0.5^2+0.3^2+0.2^2}$  that is, 2.63. Then the Concentration would be  $[1-\frac{2.63}{3}]$  that is, 0.12.

Figure 2 exhibits the concentration of the S&P 500 over time since the early 1990s. We note that the concentration is around its all time high. It is also worth mentioning that the last time the concentration was this acute (a bit less acute to be fair), was in March 2000 on the eve of the Dot Com crash.

In August 2023, the concentration was 87.7%, meaning that the effective number of stocks of the S&P 500 is just 61.

Figure 2: Concentration of the S&P 500 over time





Source: WisdomTree, FactSet, Bloomberg. 31 December 1989 to 31 August 2023 in USD. Historical performance is not an indication of future performance and any investments may go down in value.

Deconcentrate investor's portfolios - fundamental or thematic weighting
This level of concentration in market-cap weighted equity indices is worrying on many
levels. But, at a basic level, it means that investors are under-diversified when
investing in indices with market cap weighting. This could lead to heightened level of
hidden risk/volatility in a portfolio.

When it comes to dealing with this concentration, one solution that is often mentioned is equal-weighted indices. While it, of course, addresses the concentration issue, this is not the only answer.

Fundamental-driven or thematic indices can also provide de-concentration. Figure 3 highlights the concentration and the weight of the Magnificent 7 within example indices, including those of WisdomTree:

- Market-cap weighted indices: MSCI World/S&P 500
- Fundamental-weighted index: WisdomTree Global Quality Dividend Growth UCITS Index
- WisdomTree Thematic indices

Figure 3: Concentration and Magnificent 7 weights in different indices





Source: WisdomTree FactSet, Bloomberg. As of 31 August 2023, in USD. Historical performance is not an indication of future performance and any investments may go down in value.

Clearly both fundamental-weighted index examples and thematic index examples exhibit reduced concentration and reduced allocation to the Magnificent 7. By selecting only high profitability, dividend growing companies and weighting by cash dividend paid, the WisdomTree Global Quality Dividend Growth UCITS Index exhibits a lower concentration of 85% versus 91% for the MSCI World. Also, the index only invests 8.8% in the Magnificent 7 compared to 18.8% in the MSCI World.

Similarly, the concentration in all the thematic indices highlighted in Figure 3 is extremely low with the BVP Nasdaq Emerging Cloud index, for example, exhibiting a concentration of 1%. Also 6 out of those 8 thematic indices do not invest at all in the Magnificent 7 leading to very high differentiation.

### Conclusion

Diversification offers the potential to improve overall investment outcomes. Over the past decades, investors have used products tracking broad equity indices, which are typically market-cap weighted, as a tool to increase diversification in their portfolio. Unfortunately, overconcentration has rendered this tool blunter and less efficient. As an alternative, investors could turn towards other strategies, such as fundamental-weighted strategies or thematic strategies, to increase their diversification.

### Sources

- <sup>1</sup> WisdomTree, Bloomberg. 31 December 2021 to 31 December 2022 in USD.
- <sup>2</sup> WisdomTree, Bloomberg. 31 December 2022 to 15 September 2023 in USD.

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