

# The Real Impact of Mega Cap Stocks on Your Portfolio & The Market

Examining How Much Our Wealth Is Intertwined with The Performance—and Risks—of A Handful of Companies Including Apple, Amazon, Microsoft, Tesla & Others



# Introduction

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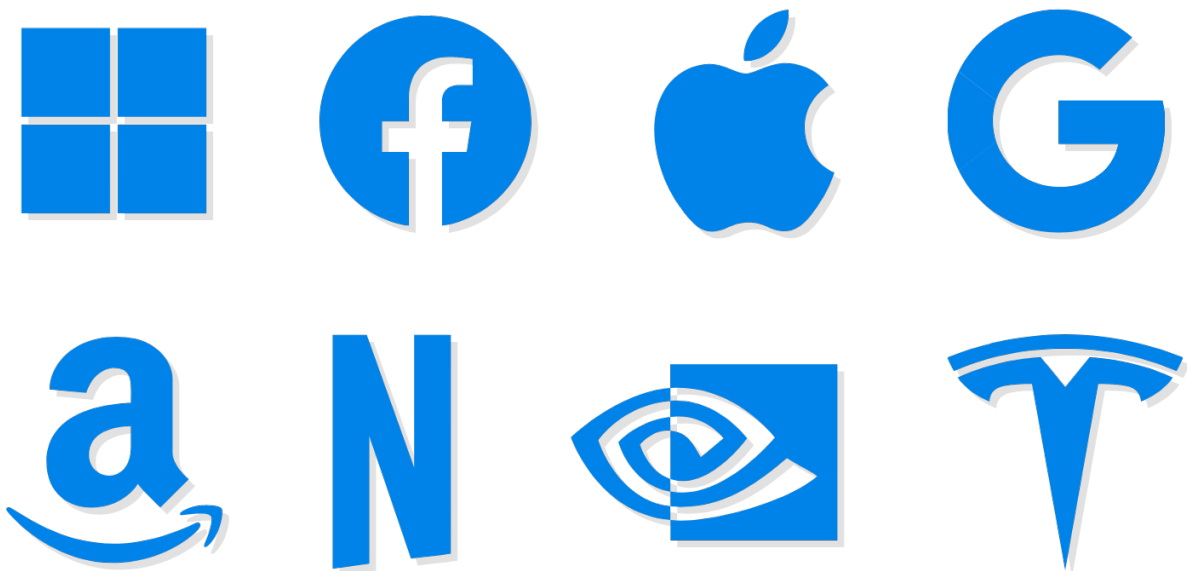
While the average client of a professional advisor understands the concept of risk and reward, most are not so aware of the double-edged sword held in their portfolios. Powerful for generating returns, yet potentially dangerous due to their size and volatility, a small cohort of very large companies has likely thwarted your best efforts to diversify clients' portfolios.

The reality of today's market is that a handful of companies, referred to here as "**Mega Cap Stocks**", are so large that it's anywhere from difficult to impossible to build a strategy that both beats its benchmark and avoids over-concentration in swingy stocks like Apple, Amazon, Tesla, and Meta Platforms. Even more, the success of these names is also highly dependent on price appreciation alone, as they generate little to no dividend income.

Fanning the fire are mutual funds and ETFs—many of them, ironically, created to make diversification more practical or investing in the whole market more accessible—which have inadvertently hidden this fact from the average investor's eyes.

If you said to a client, "I know what I said about diversification, but in reality, 10% of your nest egg is riding on the fate of just 7 companies", how would you expect them to respond?

Conversely, if a client knew exactly what they were getting into and asked, "These companies have carried my portfolio higher and higher. Let's bet even bigger on them", how would you respond?





## This analysis answers questions like...

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How much exposure does the typical investor already have to Mega Cap Stocks, through mutual funds or ETFs?

?

How much wealth can be erased when one or more of these Mega Cap Stocks crashes?

?

How would a portfolio's performance and risk be impacted by an additional position in any of the Mega Cap Stocks?

?

How would the S&P 500 have performed without these Mega Caps? Would its volatility change? And more.

Through this research, we aim to arm advisors, planners, and investors with a deeper understanding of the role Mega Cap Stocks play, and to provide insights which can facilitate meaningful conversations about the companies that are truly driving risk and reward in their portfolios.

Our findings uncover the realities of betting big on Mega Cap Stocks, as well as the benefits and drawbacks of pushing more chips into these high-performing, but relatively risky, names.

# Key Findings

1

The typical investor carries significant exposure to a small cohort of Mega Cap Stocks: just seven companies account for 7.4% of a typical 60/40 portfolio and 10.0% of an 80/20 allocation

2

If one chose to invest even more heavily in Mega Caps, investing an additional 5% of your portfolio in Microsoft, Amazon, Netflix, or Alphabet would have improved performance with the least impact on portfolio risk metrics (using a 5-year lookback from February 2022)

3

By investing 5% of a 60/40 Portfolio in an equal-weighted basket of all the Mega Cap Stocks, performance would have improved by more than 160 basis points (bps) per year with virtually no impact on portfolio risk (using a 5-year lookback from February 2022)

4

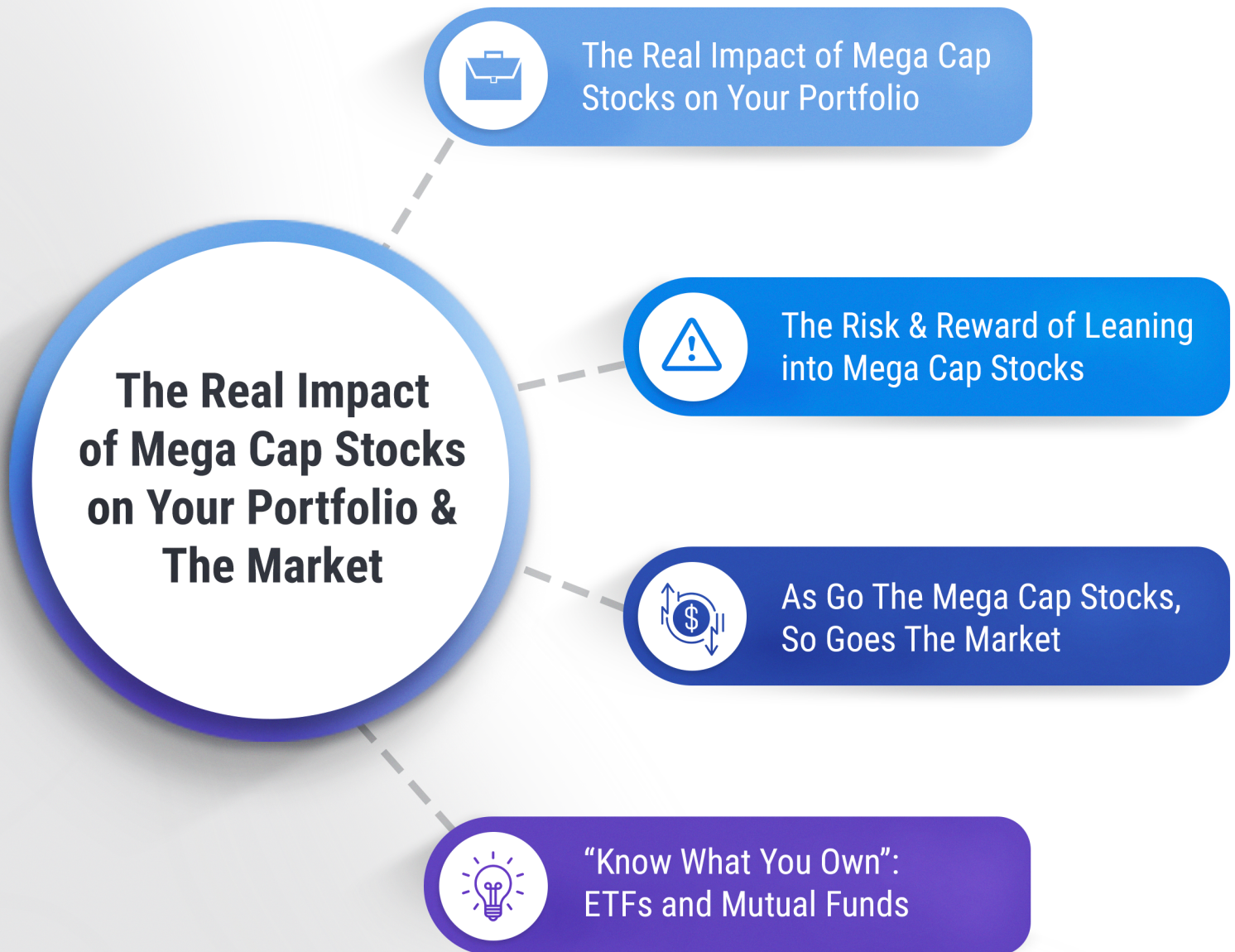
When the S&P 500 is stripped of Mega Cap Stocks' performance and risk contributions, its annual return is cut in half and its standard deviation reduced by 25% (using a 5-year lookback from February 2022)

5

Compared to mutual funds and ETFs holding none of the Mega Caps, funds with exposure to each of the Mega Cap Stocks have delivered greater annualized returns, less severe maximum drawdowns, and charged smaller fees, on an AUM-weighted basis (using a 5-year lookback from February 2022)

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# Background & Information

For the purposes of this research, **Mega Cap Stocks** refers to a cohort of eight publicly traded companies with nine listings. They are Apple ([AAPL](#)), Amazon ([AMZN](#)), Meta Platforms ([FB](#)), Alphabet ([GOOG](#) and [GOOGL](#)), which differ only in terms of voting rights, but are both commonly held by popular funds), Microsoft ([MSFT](#)), Netflix ([NFLX](#)), NVIDIA ([NVDA](#)), and Tesla ([TSLA](#)). Each was included for a number of reasons:

- Some are currently the largest companies in United States and the world
- Some are core components of popular acronyms like FANG, FAANG, FAMGA and more
- Most or all have seen their share prices rise dramatically after the 2020 market crash
- Some, namely Netflix, were formerly top-weighted index constituents but have since “fallen from grace”
- All could be considered “growth” stocks from the technology or communication services sectors, bearing relatively high risk and high reward potential

A Sample 60/40 Portfolio, 60% equity and 40% fixed income, was created using a combination of five stock and bond mutual funds to represent the holdings of a typical, moderate investor. Versions of this Sample Portfolio with 70/30, 80/20, 90/10 and all stock allocations were also created. (See the holdings table for funds and weights used.)

Additionally, to measure the impact of betting even bigger on the handful of Mega Cap Stocks, variations of the Sample 60/40 Portfolio were created with 5% of the overall equity allocation shifted from mutual fund holdings to the equity portion to each of the Mega Cap names. Furthermore, we evaluated two 60/40 Portfolios in which the entire equity allocation was reassigned to an equal-weight basket of the Mega Caps, rebalanced quarterly, and a market cap-weighted basket of the Mega Cap Stocks, to show the effects of “letting it ride”.

*Note: Total Mega Cap Stocks exposure for funds and portfolios was calculated using the top 25 holdings of the mutual funds and ETFs used. At the time of writing, Netflix ([NFLX](#)) was not in the top 25 holdings of any underlying fund.*

*All data is as of February 28, 2022, unless otherwise noted.*



*All of the research and analyses herein was conducted using only YCharts tools. Specifically, **Model Portfolios**, the **Fund Screener**, **Fundamental Charts**, **Scatter Plot**, **Comp Tables**, **Timeseries Analysis**, the **Excel Add-in**, and various **security quote pages** were leveraged.*

Component Name	Sample 60/40 Portfolio	Sample 70/30 Portfolio	Sample 80/20 Portfolio	Sample 90/10 Portfolio	Sample All Stock Portfolio
Vanguard Total Stock Market Index (VTSMX)	35.00%	40.83%	46.66%	52.50%	58.33%
Vanguard Total International Stock Index (VGTSX)	20.00%	23.34%	26.67%	30.00%	33.33%
Vanguard Emerging Markets Stock Index (VEIEX)	5.00%	5.83%	6.67%	7.50%	8.33%
Vanguard Total Bond Market Index (VBMFX)	30.00%	22.50%	15.00%	7.50%	0.00%
Vanguard Short-Term Bond Index (VBISX)	10.00%	7.50%	5.00%	2.50%	0.00%

Component Name	Sample 60/40 Portfolio	Sample 60/40 Portfolio with 5% Mega Cap Stocks
Vanguard Total Stock Market Index (VTSMX)	35.00%	32.08%
Vanguard Total International Stock Index (VGTSX)	20.00%	18.34%
Vanguard Emerging Markets Stock Index (VEIEX)	5.00%	4.58%
Vanguard Total Bond Market Index (VBMFX)	30.00%	30.00%
Vanguard Emerging Markets Stock Index (VEIEX)	10.00%	10.00%
Vanguard Short-Term Bond Index (VBISX)	-	5.00%

# The Real Impact of Mega Cap Stocks on Your Portfolio

With the returns that Mega Cap Stocks have delivered over the years, it's understandable that investors ask about buying more shares of highly visible, high-performing companies like Apple, Amazon, or Microsoft, to name a few.

But, be aware. Even the typical moderate portfolio (60% equities and 40% fixed income, built using passive mutual funds) is likely to already carry significant exposure to Mega Cap Stocks—**Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, Meta Platforms**, and perhaps up until recently, **Netflix**.

A question like, *'Should I buy some extra shares of Tesla?'*, can be hard to answer in the affirmative knowing two things: that the client already owns Tesla indirectly through ETFs, and that the stock has a **volatile, panic-inducing history**.





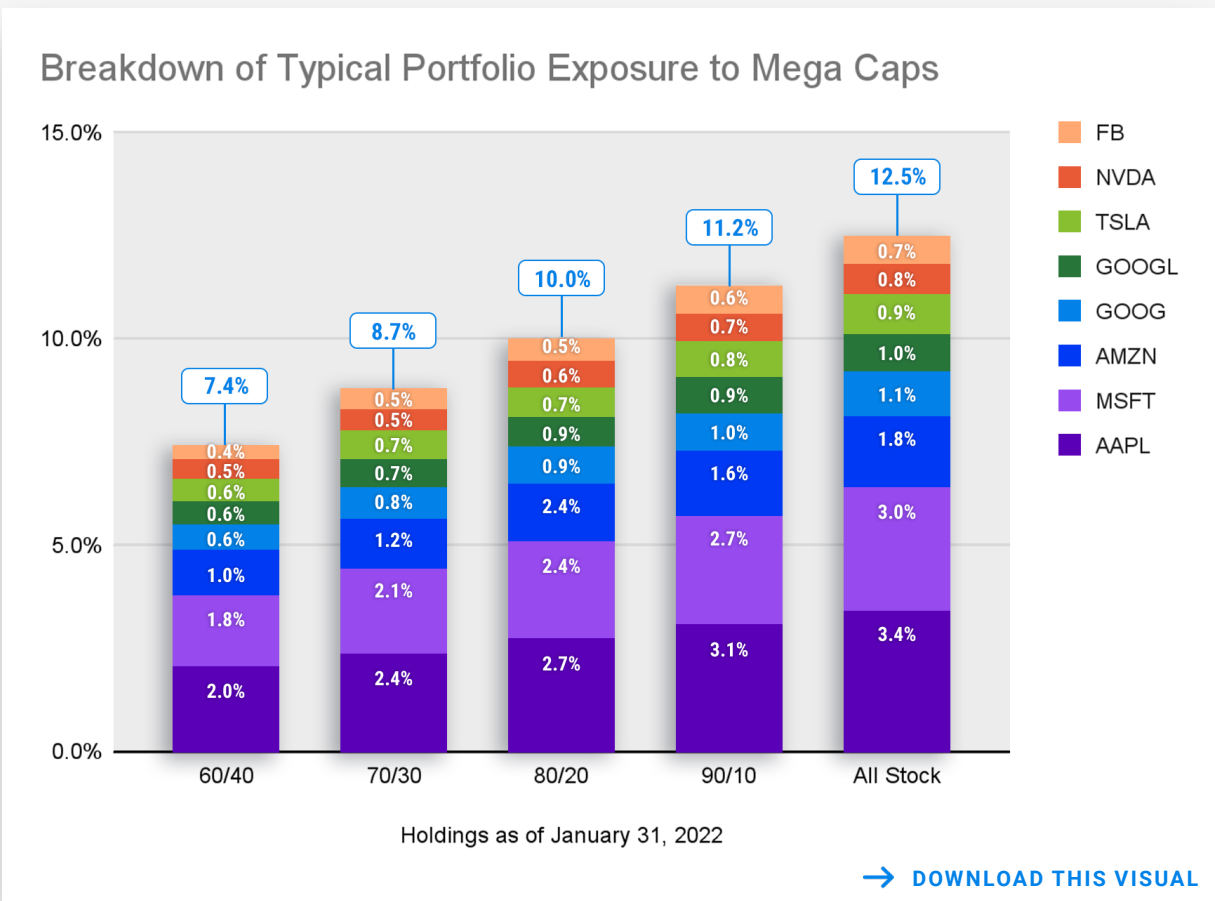
## How much exposure does the typical investor portfolio already have to Mega Cap Stocks?

A Sample 60/40 Portfolio (see fund holdings table in 'Background & Information'), though well-diversified with fixed income and international stocks, still carries a combined 7.4% exposure to just eight Mega Cap Stocks.

With an 80/20 stock-bond allocation, the combined exposure equals 10.0% and an all-stock portfolio has about one-eighth, or 12.5%, of its total value riding on the Mega Caps.

For many advisors and investors, this is vital information to consider in conversations and decisions about portfolio construction, or at least a "know what you own" lesson in practice. Yet, for some clients, that concentrated exposure to Mega Caps may be intentional, known, or a non-issue.

**Jump to section: *ETFs and Mutual Funds with The Most Mega Cap Stock Exposure***





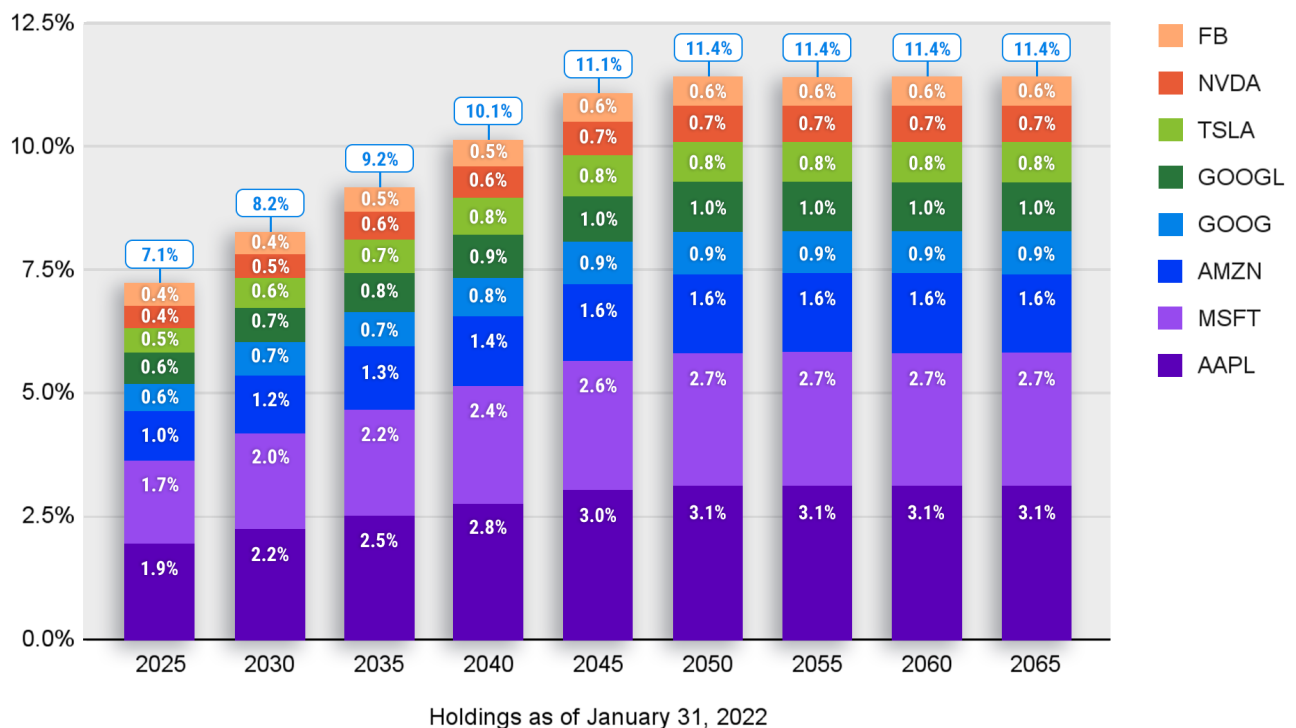
## How invested in Mega Cap Stocks are “Target Date” allocation funds?

A large percentage of 401(k) and IRA account holders use target-date funds to simplify asset allocation and diversification. In general, these funds-of-funds are designed to first carry mostly equity exposure, then gradually shift to fixed income as the long-term investor’s assumed retirement date draws nearer.

But because they are often used by the most passive and do-it-yourself investors, target date funds’ true concentration in Mega Cap Stocks is a stone that is rarely turned over.

Using the lineup of Vanguard Target Retirement funds as an example, investors in target-date funds would carry up to an 11.4% combined exposure to the eight Mega Cap Stocks—in the **2050 Fund**, Mega Cap exposure is greater than total bond exposure. As of January 2022, little more than three years from the retirement finish line, an investor in **Vanguard’s Target Retirement 2025 (VTTVX)** fund had 7.1% of their life savings riding on seven companies (or eight Mega Caps due to Alphabet’s dual **GOOG** and **GOOGL** listings).

### Target Date Fund Investment in Mega Cap Stocks



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## How much of investors' wealth is erased when one or more of these Mega Cap Stocks crashes?

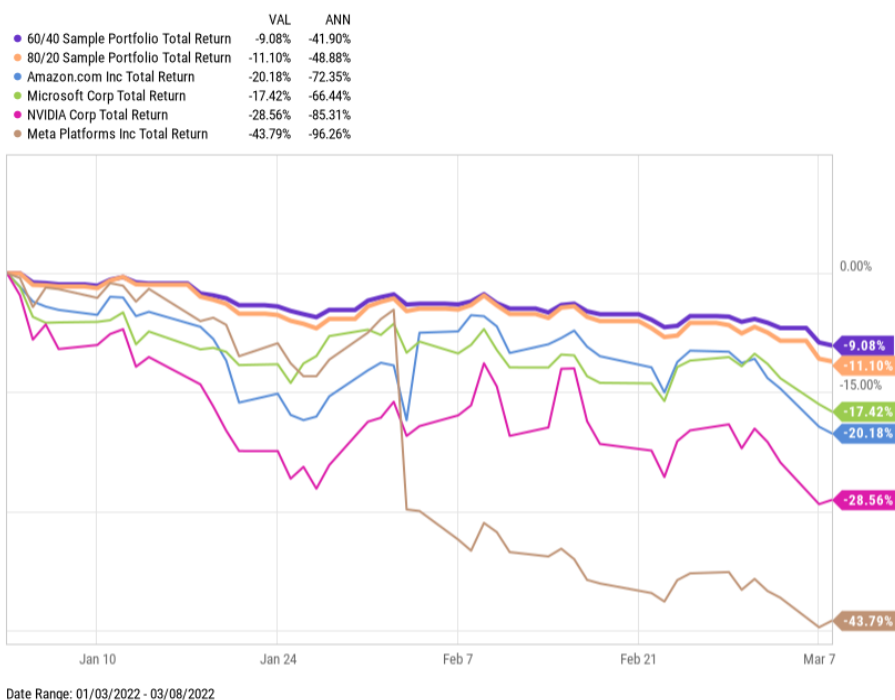
Since most of the Mega Cap Stocks cohort—**Apple (AAPL)**, **Microsoft (MSFT)**, **Alphabet (GOOG/L)**, **Amazon (AMZN)**, **NVIDIA (NVDA)**, **Tesla (TSLA)**, **Meta Platforms (FB)**, and **Netflix (NFLX)**—are growth companies in the tech and consumer discretionary sectors, they tend to react sharply to interest rates, economic cycles, and other systemic factors.

Mega Cap Stocks have crashed, and often fallen in unison, on a number of occasions in recent memory. It's in these times that your true, outsized concentration to a small handful of Mega Cap Stocks might become noticeable...and painful.

Acknowledging that any number of securities may have also been dragging (or lifting) the Sample Portfolios in these periods, as noted earlier, the Mega Caps make up a significant portion of their holdings—7.4% of the Sample 60/40 Portfolio and 10.0% of the 80/20 Portfolio.

In early 2022, the Federal Reserve raised interest rates, geopolitical risk piqued and oil prices rose to record levels. Since the start of the year, a \$1,000,000 portfolio invested in 60% equities, 40% fixed income would have lost \$90,800 in value. A more aggressive strategy invested in 80% equities and 20% fixed income would have declined by \$111,000.

**\$AMZN, \$MSFT, \$NVDA & \$FB Sell-Off in Early 2022**

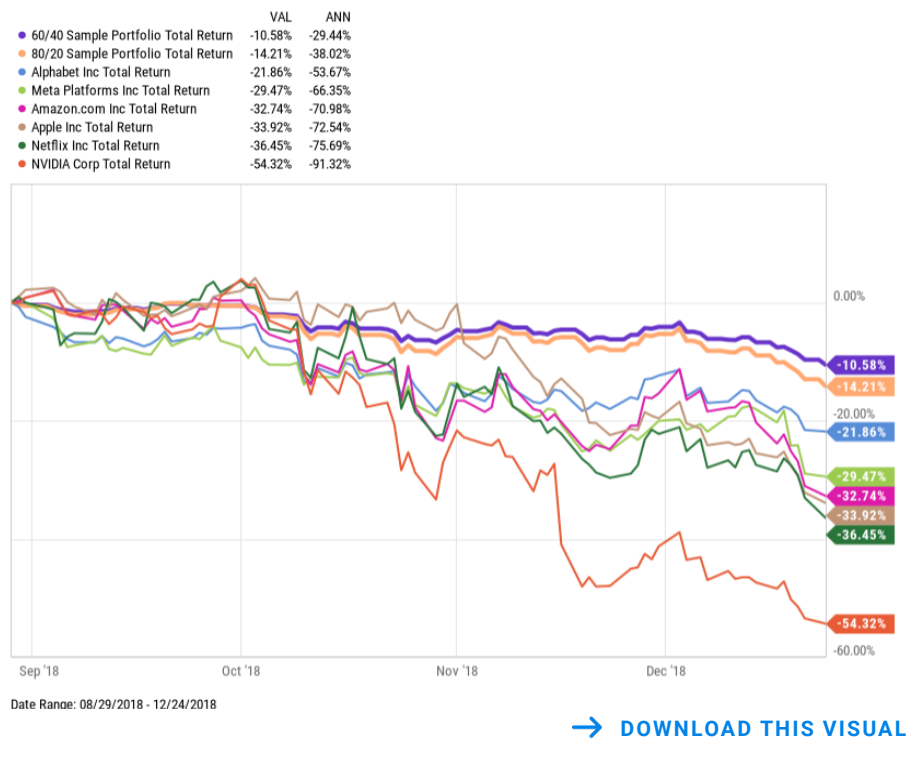


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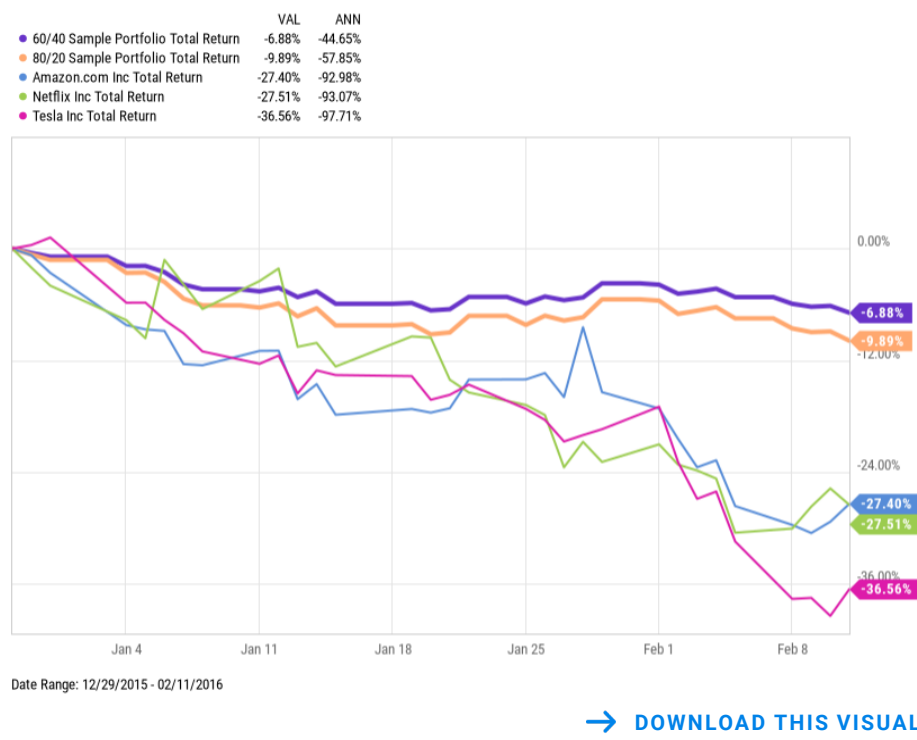
During the fourth quarter of 2018, after four interest rate hikes from the Fed and a cooling-off of valuations for growth stocks, six Mega Cap Stocks crashed by 20% or more. In about four months, a 60/40 portfolio of \$1,000,000 would have lost \$105,800 and an 80/20 portfolio would have shed \$142,100 of value.

**\$GOOG, \$FB, \$AMZN, \$AAPL, \$NFLX, \$NVDA Sell-Off in Late 2018**



Amazon, Netflix, and Tesla each lost about a third of their value in early 2016. If you had \$1,000,000 invested in a portfolio of 80% equities and 20% fixed income, that portfolio would have lost \$98,900 of its value in little more than five weeks.

**\$AMZN, \$NFLX & TSLA Sell-Off in Early 2016**



# The Risk & Reward of Leaning into Mega Cap Stocks

Even knowing that the average portfolio already carries significant exposure (7.4% combined exposure in a Sample 60/40 Portfolio and 10.0% in an 80/20 allocation) to a small group of Mega Cap Stocks—**Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, Meta Platforms**, and perhaps up until recently, **Netflix**—more risk-tolerant investors might be curious about piling on more Mega Cap exposure.

While past performance is never a guarantee of future results, it's easy to connect the dots and conclude that investing in Apple, Amazon, Tesla, or even Netflix in the 2010s would have been an excellent decision.

History, and the hypothetical portfolio strategies below, illustrate that adding an additional 5% position in any single Mega Cap Stock, beyond the indirect exposure through mutual funds or ETFs (and while maintaining an overall 60% equity, 40% fixed income allocation) would have meaningfully boosted portfolio performance and risk, the latter by way of standard deviation and drawdowns, alike.



## Which Mega Cap Stock would have had the largest effect, positive or negative, on portfolio performance and risk?

Through the lens of risk versus reward, an additional stake in Microsoft, Amazon, Netflix, or Alphabet (formerly Google) over the last five years would have delivered extra returns with minimal impact on the Sample 60/40 Portfolio's standard deviation.

As compared to the Sample 60/40, putting 5% of your portfolio in any of these four Mega Caps would have resulted in an additional 90 to 140 basis points of total return per year, and an annualized standard deviation just 1 to 21 basis points higher (still

maintaining an overall 60% equity, 40% fixed income allocation).

However, throwing more chips at a different Mega Cap Stock, such as Tesla, would have moved the needle in a much bigger way. A 5% position in the electric vehicle manufacturer would have increased the Sample 60/40 Portfolio's annual return by 385 basis points, to 11.94% from 8.09% per year. On the other side of the same coin: annualized standard deviation would have risen by 186 basis points.



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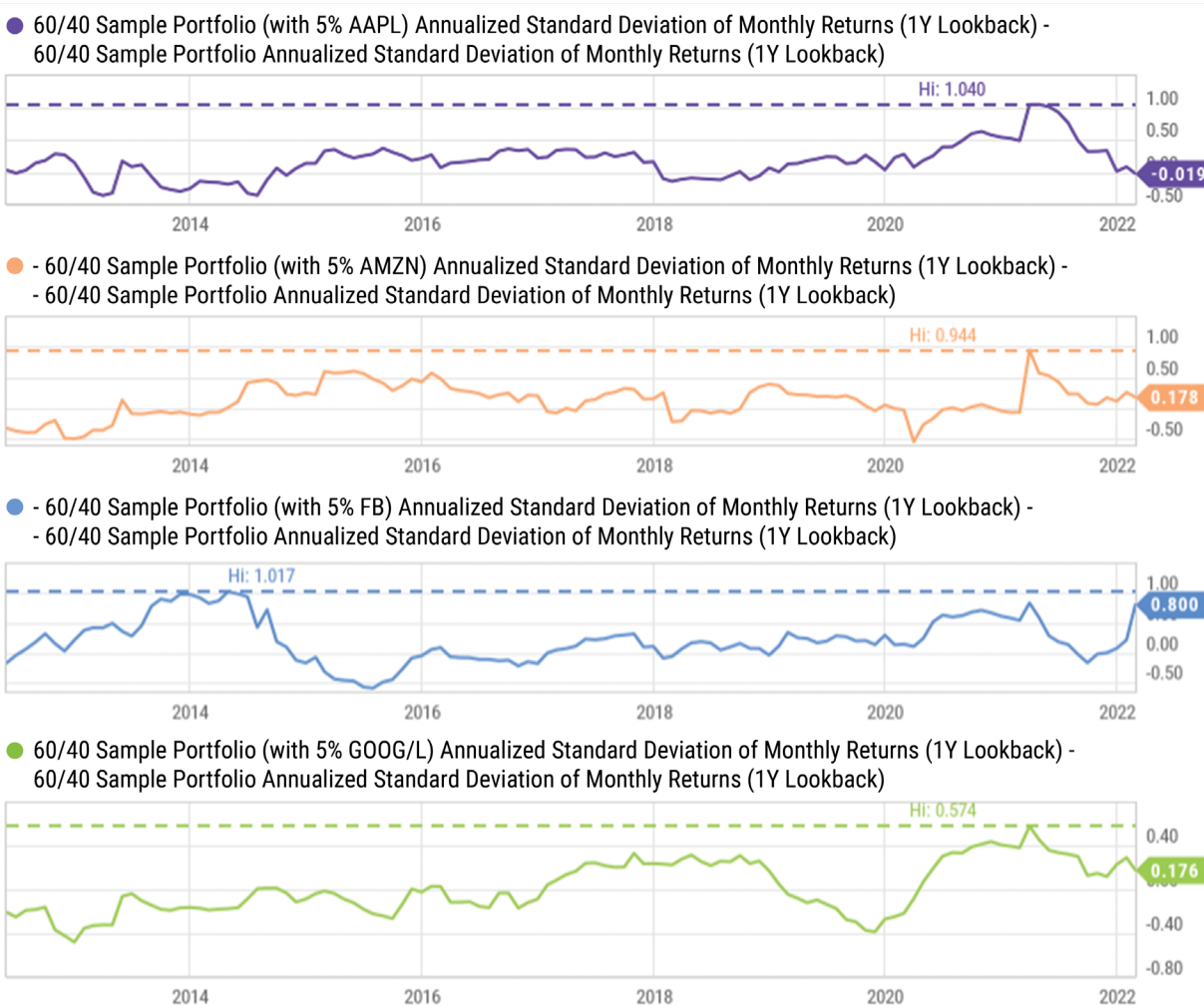


### Marginal Risk from 5% Stake in Mega Cap Stocks

Over time, the Mega Cap Stocks have become household names due to their roles in both our daily lives and our portfolios. But as noted, their standout performance comes with equally eye-opening volatility and drawdowns.

These charts use a spread calculation to show the marginal standard deviation taken on by the Sample 60/40 Portfolio when a 5% Mega Cap position is added (while maintaining a 60% equity, 40% fixed income allocation).

Since 2012, Tesla, NVIDIA, and Netflix have raised portfolio volatility by the most basis points. Unfortunately for investors who value stability, these same three names happened to deliver the best marginal return.

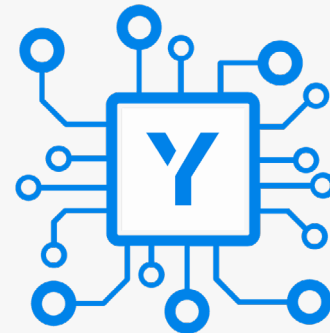


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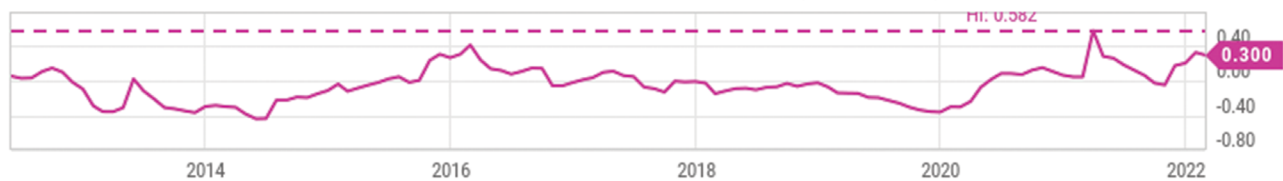
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### Extra Performance from 5% Stake in Mega Cap Stocks

Going back to June 2012—the first calendar month in which all nine of the Mega Cap Stocks in this study were publicly traded—Tesla, NVIDIA, and Netflix would have given the Sample 60/40 Portfolio the most lift, in terms of cumulative performance.



● 60/40 Sample Portfolio (with 5% MSFT) Annualized Standard Deviation of Monthly Returns (1Y Lookback) - 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)



● 60/40 Sample Portfolio (with 5% NFLX) Annualized Standard Deviation of Monthly Returns (1Y Lookback) - 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)



● 60/40 Sample Portfolio (with 5% NVDA) Annualized Standard Deviation of Monthly Returns (1Y Lookback) - 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)



● 60/40 Sample Portfolio (with 5% TSLA) Annualized Standard Deviation of Monthly Returns (1Y Lookback) - 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)



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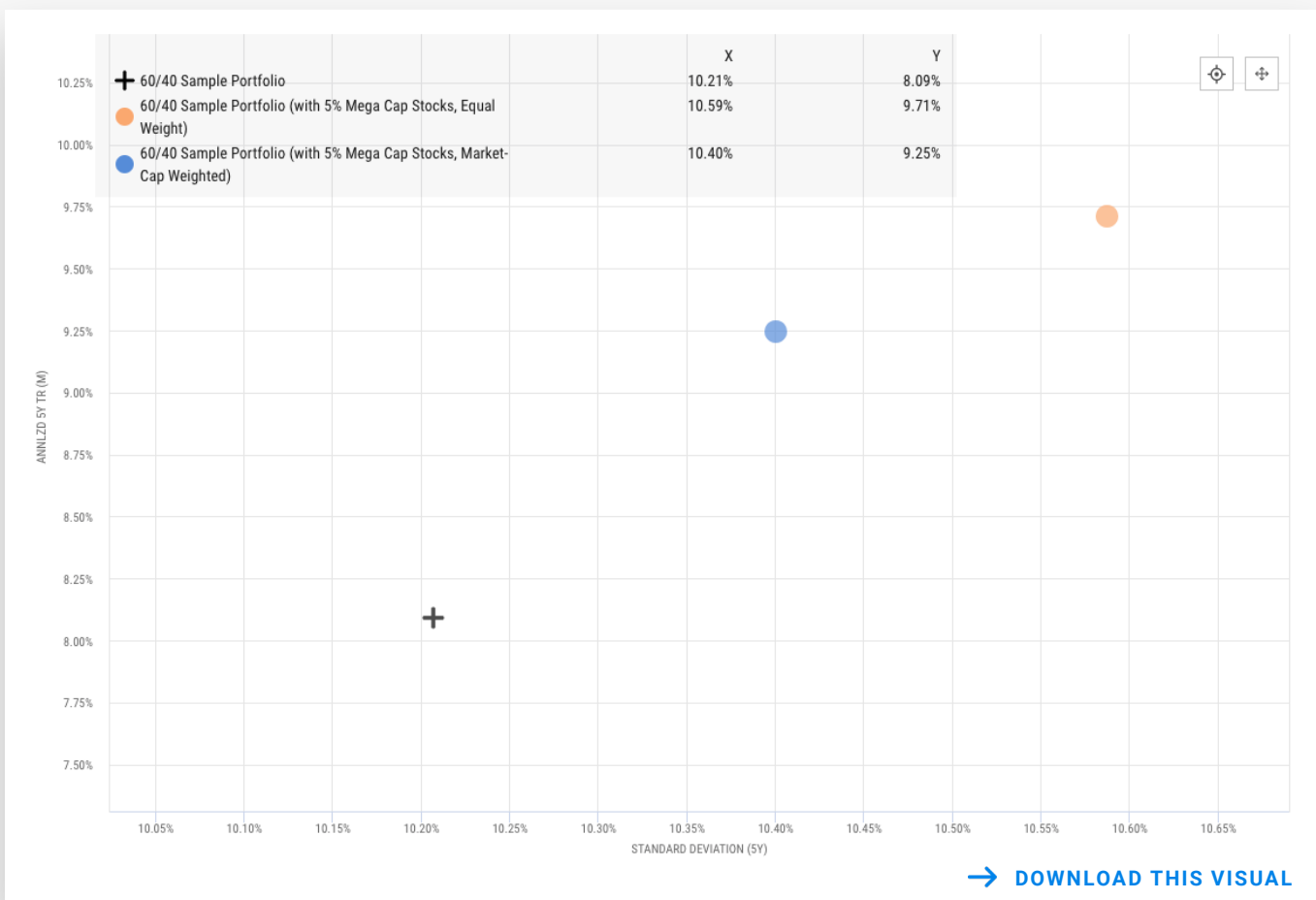


## By how much would a basket of Mega Cap Stocks have affected portfolio performance, volatility, and drawdowns?

For advisors and investors seeking that sweet spot of risk-adjusted returns, investing in a basket of Mega Cap Stocks may be a step in the right direction.

Beyond augmenting the Sample 60/40 Portfolio with a 5% stake in one Mega Cap Stock at a time, we also examined how an equally sized investment in all eight companies (nine stocks due to Alphabet's **GOOG** and **GOOGL** share classes) would impact performance and standard deviation.

Interestingly, an equal-weight basket of the nine Mega Cap Stocks (in which the Mega Cap Stocks were rebalanced quarterly) added significantly more return and risk than a market-cap-weighted basket could offer. The former added more than 162 basis points of performance and just 38 bps of standard deviation per annum, whereas the latter (a Sample 60/40 Portfolio with 5% invested in Mega Cap Stocks, market-cap-weighted) bolstered annual performance and volatility by 116 bps and 19 bps, respectively.





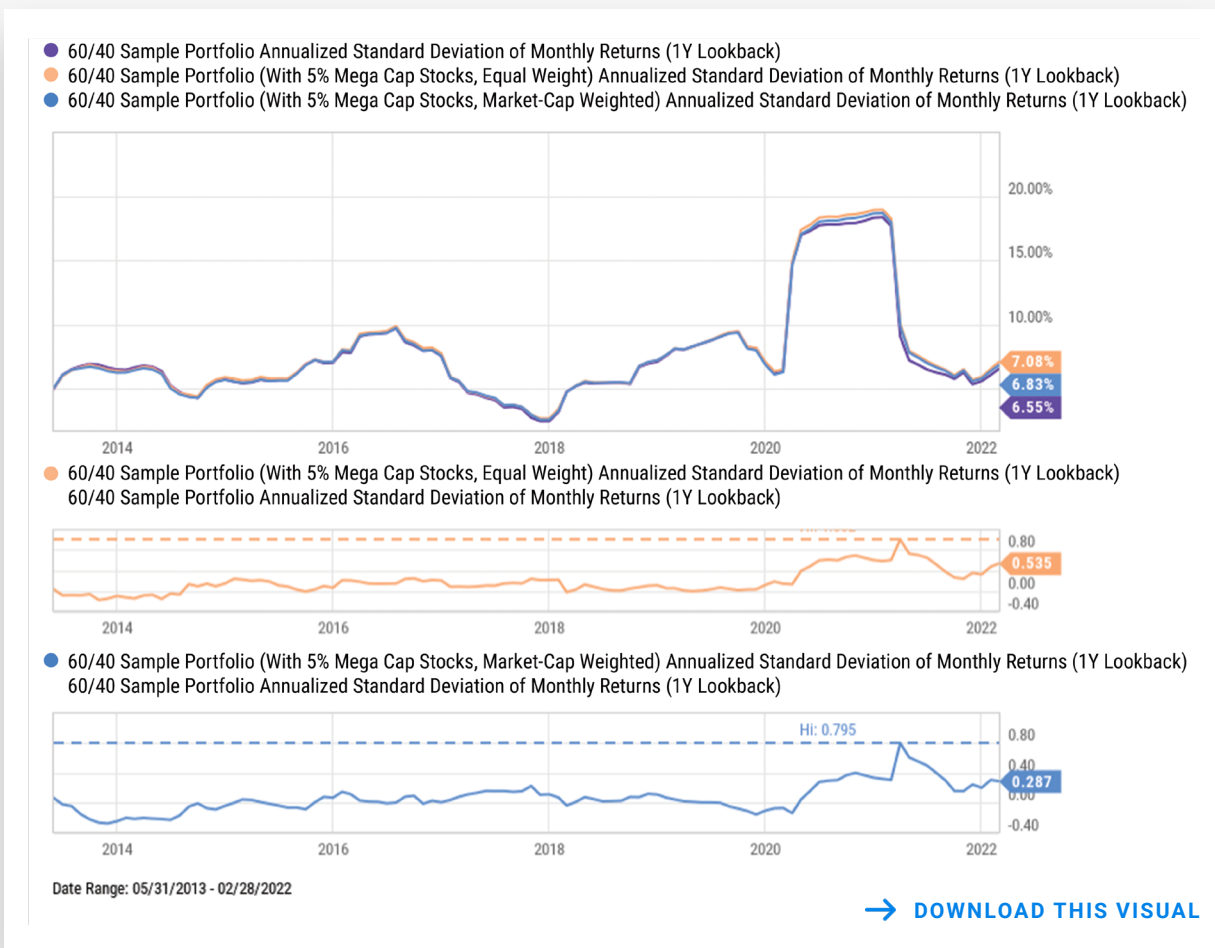
### Extra Performance from 5% Stake in a Basket of Mega Cap Stocks

Going back to June 2012, investing 5% of your total 60% equity allocation into the equal-weight basket of Mega Cap Stocks would have added 160 basis points per year to the Sample 60/40 Portfolio's performance. The market-cap-weighted basket would have added slightly less performance.

### Marginal Risk from 5% Stake in a Basket of Mega Cap Stocks

Here, the basket of Mega Cap Stocks would have delivered what each of its parts couldn't do on their own. Prior to 2020, the hypothetical portfolios with a 5% allocation to a basket of Mega Cap Stocks added almost no marginal standard deviation relative to the Sample 60/40 Portfolio.

These charts use a spread calculation to show the marginal standard deviation which the Sample 60/40 Portfolio took on when a 5% position to a basket of Mega Cap Stocks, both equal-weight and market cap-weighted, is added (while maintaining a 60% equity, 40% fixed income allocation).



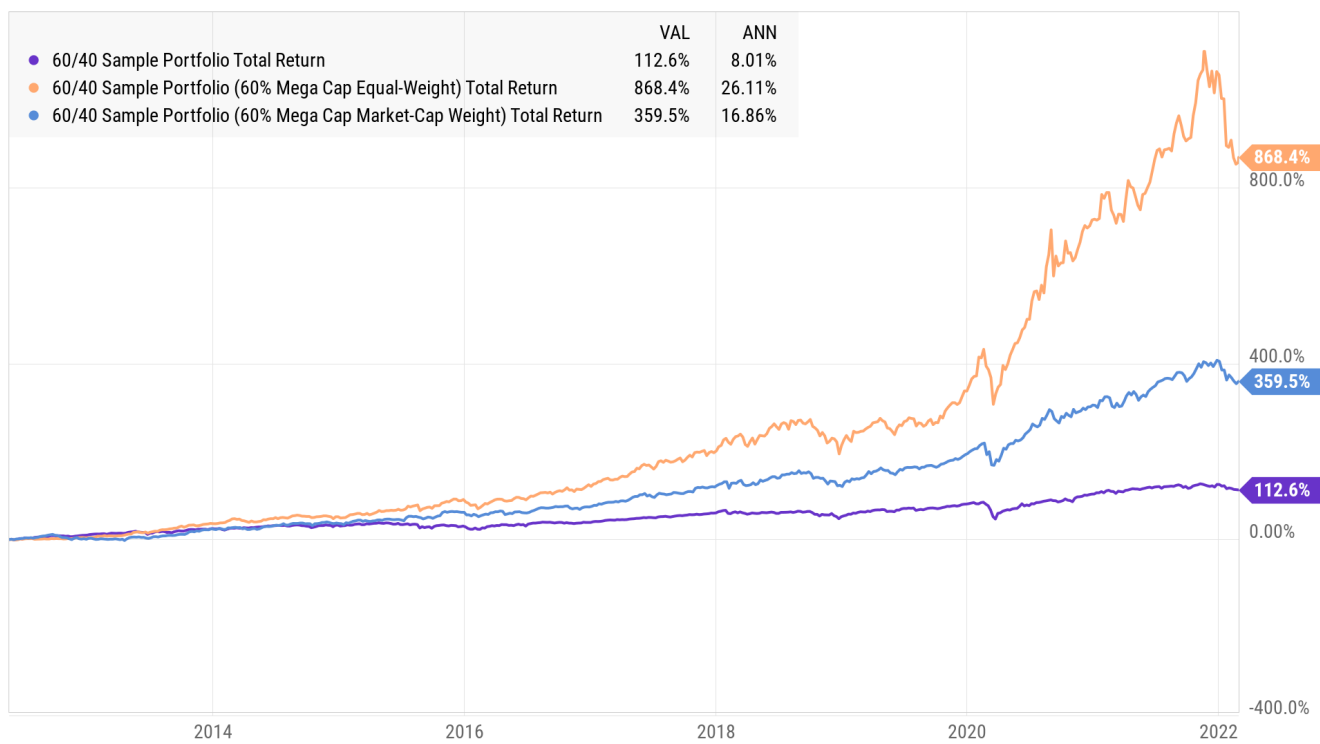


## What would have happened if you bet the house on Mega Cap Stocks?

Just as it's considered a bold bet to put all your chips on a single number at the Roulette table, most advisors warn against putting all your eggs in one basket.

There may be such a thing as too much Mega Cap exposure in a portfolio. While the strategy would be far from modern portfolio theory, it's worth asking what performance and risk tradeoffs an investor might face if all of their equity exposure were invested in these Mega Cap Stocks.

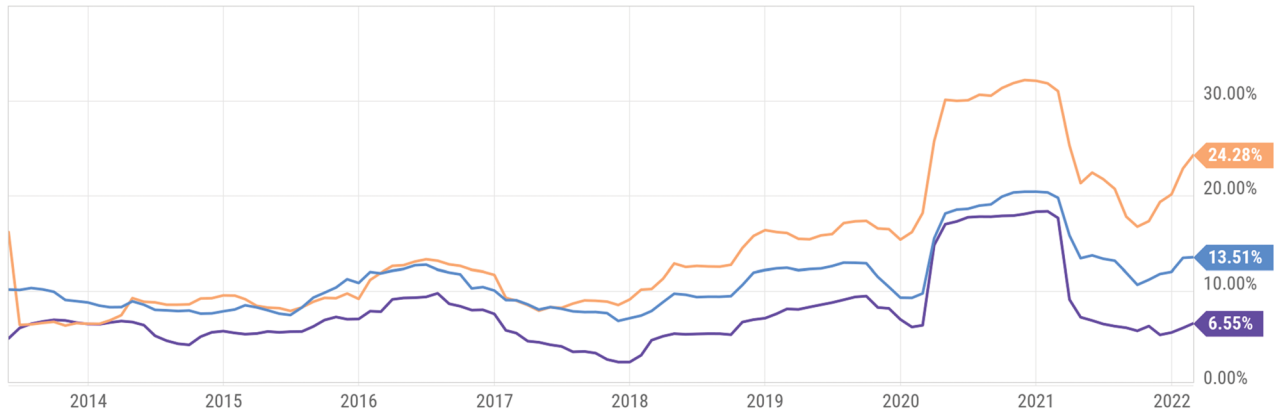
Moving the Sample 60/40 Portfolio's entire 60% equity allocation to the equal-weight basket of Mega Cap Stocks would have more than doubled its annual performance since 2012, from 8.01% to 26.11%. Even more, the same portfolio makeup using the market cap-weighted Mega Caps basket would have tripled annual performance to 26.11%.



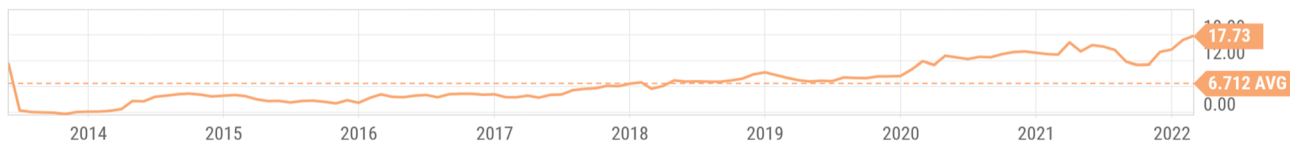
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- 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)
- 60/40 Sample Portfolio (60% Mega Cap Equal-Weight) Annualized Standard Deviation of Monthly Returns (1Y Lookback)
- 60/40 Sample Portfolio (60% Mega Cap Market-Cap Weight) Annualized Standard Deviation of Monthly Returns (1Y Lookback)



- 60/40 Sample Portfolio (60% Mega Cap Equal-Weight) Annualized Standard Deviation of Monthly Returns (1Y Lookback)
- 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)



- 60/40 Sample Portfolio (60% Mega Cap Market-Cap Weight) Annualized Standard Deviation of Monthly Returns (1Y Lookback)
- 60/40 Sample Portfolio Annualized Standard Deviation of Monthly Returns (1Y Lookback)

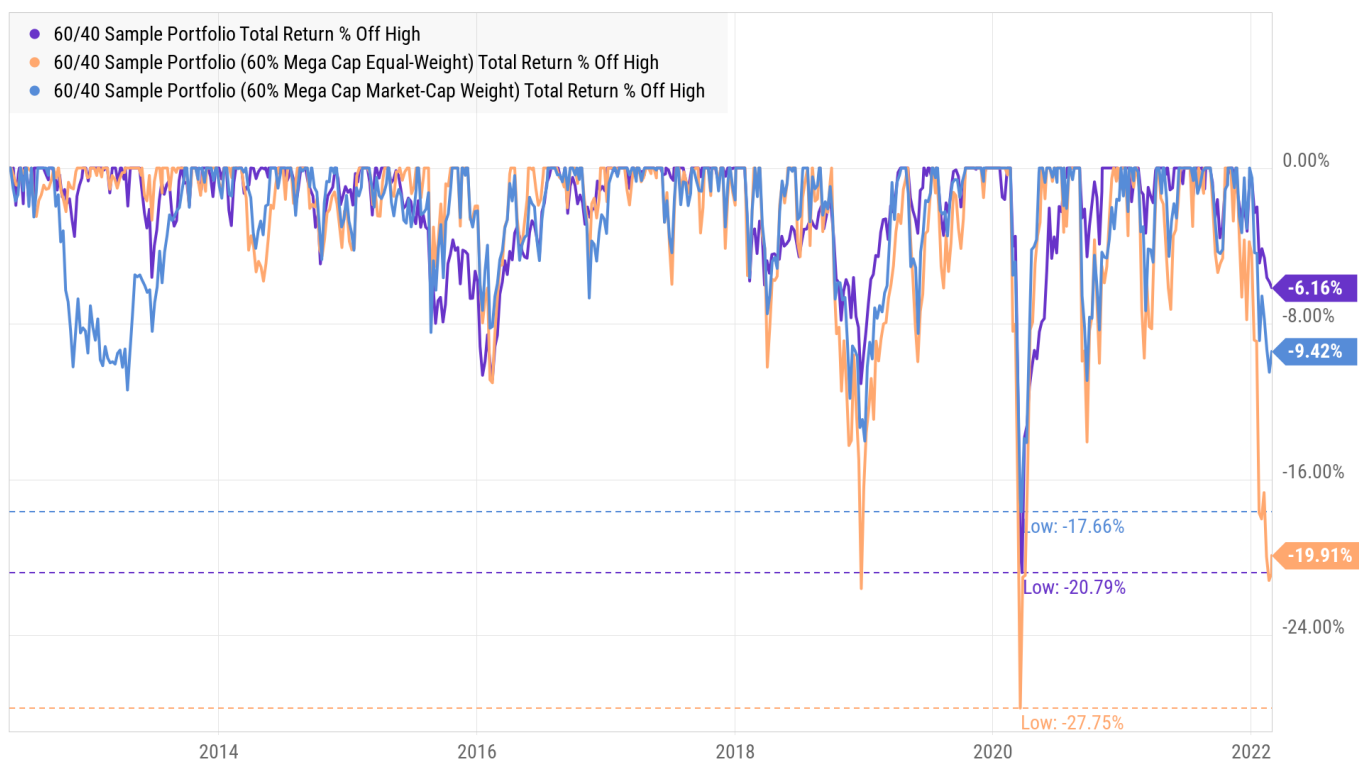


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But due to the frequency and magnitude of their drawdowns, the 60/40 Portfolios with all 60% of their equity allocation invested baskets of Mega Cap Stocks carried significantly higher standard deviations.

The 60/40 Portfolio featuring the market-cap-weighted basket of Mega Cap Stocks averaged a standard deviation higher by 350 basis points, and the same metric was a staggering 670 bps higher for 60/40 Portfolio holding the equal-weight Mega Caps basket, on average.





Date Range: 05/18/2012 - 02/28/2022

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Perhaps more visible than standard deviation, the roller coaster of significant portfolio drawdowns can be most jarring to investors, clients of professional advisors, or otherwise.

A rapidly falling portfolio value, in dollar terms, tends to affect investors' behavior more than anything else. As such, this percent-off-high visual shows that both the market-cap-weighted and equal-weight

baskets of Mega Cap Stocks worsened the Sample 60/40 Portfolio's drawdowns in times of market-wide corrections.

That said, there are a number of minor pullbacks in which all three portfolios drew down a similar amount, and even some when the Sample 60/40 Portfolio (in purple) had the largest decline from its recent high.

# As Go The Mega Cap Stocks, So Goes The Market

It is by no coincidence that this group of Mega Cap Stocks—**Apple (AAPL)**, **Microsoft (MSFT)**, **Alphabet (GOOG/L)**, **Amazon (AMZN)**, **NVIDIA (NVDA)**, **Tesla (TSLA)**, **Meta Platforms (FB)**, and **Netflix (NFLX)**—has risen to dominate investor portfolios.

They each became one of the largest companies in the world, and a mainstay in popular mutual funds and ETFs, by virtue of their growing revenues, standout returns for investors, and trillion-dollar market capitalizations.

But just how much of the US stock market's success in the last decade has been driven by solely the Mega Cap Stocks?



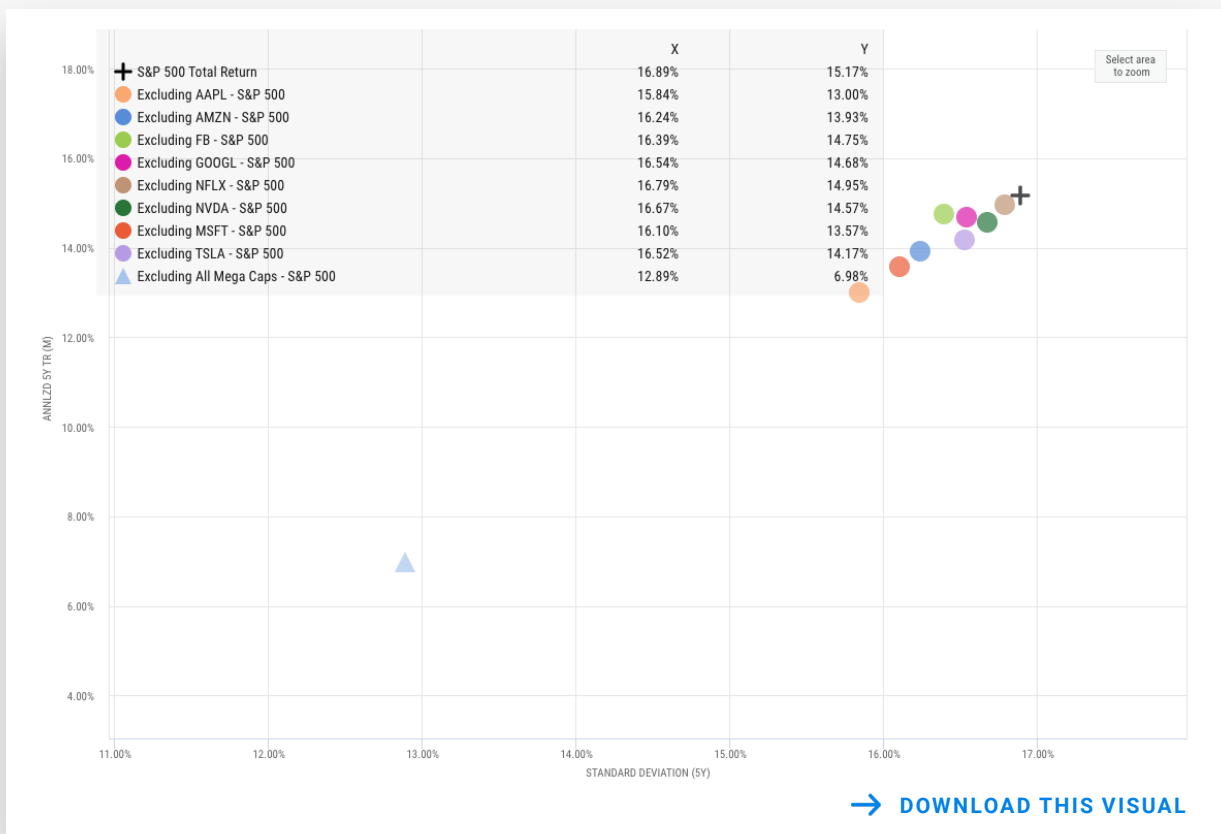
# What effect would excluding Mega Cap Stocks have had on the S&P 500's historical performance and risk profile?

If all nine Mega Cap Stocks—**Apple (AAPL)**, **Microsoft (MSFT)**, **Alphabet (GOOG/L)**, **Amazon (AMZN)**, **NVIDIA (NVDA)**, **Tesla (TSLA)**, **Meta Platforms (FB)**, and **Netflix (NFLX)**—were not constituents of the S&P 500, the index's performance and risk profile would be markedly different.

When stripping out the entire cohort of Mega Cap Stocks, the S&P 500's annualized performance in the five-year period ending February 28, 2022 would have fallen to 6.98% from 15.17% annually—a reduction of more than half. The index's standard

deviation would also have been slashed by 4 percentage points, but the lost returns seem to sting more than the reduced volatility.

Individually, excluding any of the nine Mega Cap Stocks would have reduced both the performance and volatility of the S&P 500. That said, Netflix (NFLX), Meta Platforms (FB), and Alphabet (GOOG/L) would have been missed the least, in terms of performance contributed to the overall index. (Performance and standard deviation for Alphabet's GOOG share class are identical to GOOGL, and are thus not shown here.)





The pattern persists in each full calendar year since 2015. When the performance of each Mega Cap Stock is hypothetically excluded from the S&P 500's total return, the index suffers. Notably, 2020's 18.4% total return for the S&P 500 would have been just 1% if all nine Mega Cap Stocks weren't constituents.

Only in the 2022 year-to-date period (through February 28, 2022) would removing the Mega Cap Stocks have actually boosted the S&P's growth, save for avoiding Meta Platforms (FB) in 2018.

Change to S&P 500 Total Return (% Points) When Excluding Mega Cap Stocks								
	YTD 2022	2021	2020	2019	2018	2017	2016	2015
Excluding AAPL	0.5	-2.75	-4.77	-3.64	-0.1	-1.83	-0.54	0.02
Excluding AMZN	0.33	-0.17	-3.59	-0.99	-0.96	-1.26	-0.39	-1.19
Excluding FB	0.58	-0.71	-0.84	-1.28	0.36	-1.13	-0.25	-0.46
Excluding GOOG(L)	0.16	-1.46	-0.5	-0.59	0.04	-0.56	-0.05	-0.56
Excluding MSFT	0.66	-3.11	-2.31	-2.44	-0.56	-1.12	-0.42	-0.6
Excluding NFLX	0.16	-0.12	-0.49	-0.25	-0.32	-0.19	-0.04	-0.21
Excluding NVDA	0.28	-1.78	-1.04	-0.4	-0.02	-0.36	-0.33	-0.05
Excluding TSLA	0.43	-1.43	-3.96	-0.19	-0.08	-0.14	0.02	-0.04
Excluding All Mega Caps	3.27	-12.63	-17.38	-10.14	-1.7	-6.99	-2.08	-3.64
S&P 500 Total Return	-8.0%	28.7%	18.4%	31.5%	-4.4%	21.8%	12.0%	1.4%

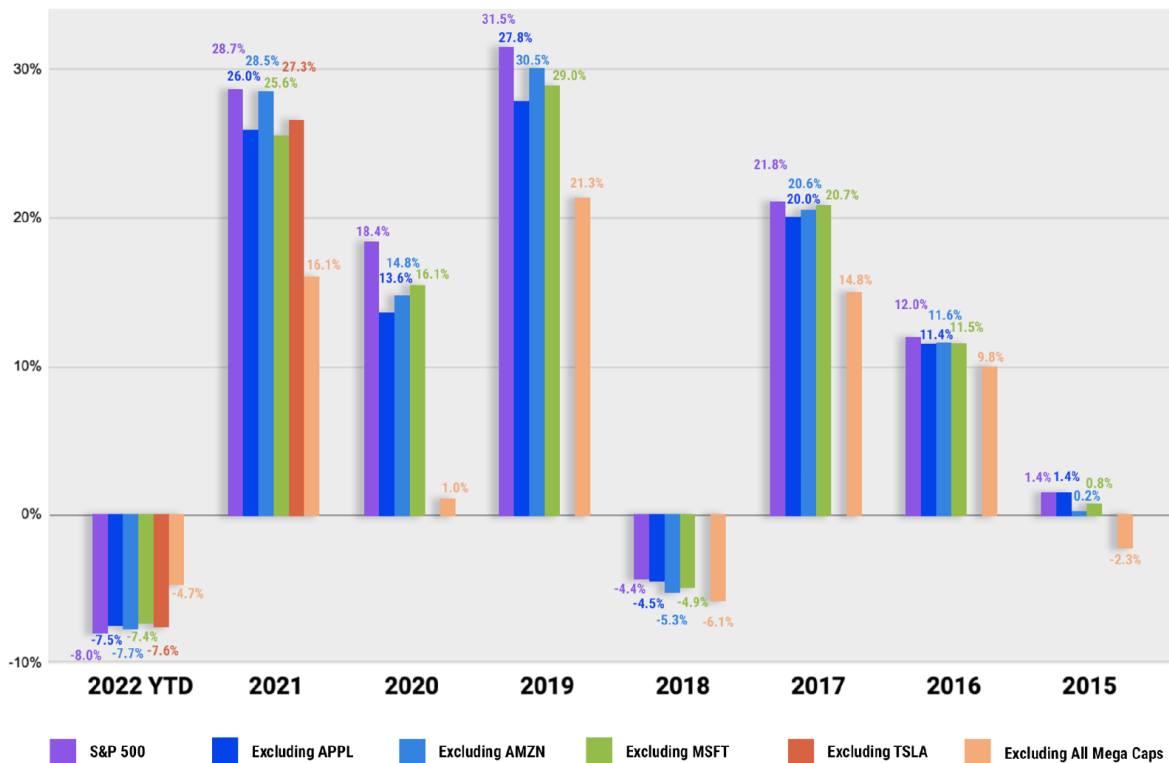
*\*Year-to-date data as of February 28, 2022.*

Looking more closely at the best-performing Mega Cap Stocks since 2015, excluding Apple, Amazon, Microsoft, or Tesla from the S&P 500 would have materially changed the rising tide which has lifted all investors' boats in recent years.



## S&P 500 Total Return - Excluding Select Mega Cap Stocks

\*Year-to-date data as of February 28, 2022.



\*Tesla added to S&P 500 index on December 21, 2020

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## By how much is the S&P 500's volatility reduced when excluding Mega Cap Stocks?

The effect on the S&P 500's volatility when excluding each of the Mega Cap Stocks—both individually and together—is largely, as expected, due to what we already know about these stocks' heightened risk-reward profiles.

But interestingly, a sans-Tesla S&P 500 posted a slightly higher standard deviation from 2017 to 2019. The hypothetical S&P 500s excluding Apple, Meta Platforms (then Facebook), Netflix, and NVIDIA also had lesser volatility in 2017.

**Change to S&P 500 Annlzd. Standard Deviation (% Points) When Excluding Mega Cap Stocks**

	YTD 2022	2021	2020	2019	2018	2017	2016	2015
Excluding AAPL	-1.00	-0.76	-2.32	-0.62	-0.47	0.10	-0.55	-0.65
Excluding AMZN	-0.48	-0.65	-1.43	-0.51	-0.55	-0.01	-0.24	-0.38
Excluding FB	-0.51	-0.40	-1.30	-0.37	-0.10	0.07	-0.14	-0.30
Excluding GOOG(L)	-0.16	-0.40	-1.05	-0.11	-0.13	-0.05	-0.18	-0.29
Excluding MSFT	-0.55	-1.01	-1.75	-0.35	-0.32	-0.03	-0.33	-0.52
Excluding NFLX	-0.13	-0.16	-0.60	-0.07	0.03	0.03	-0.08	-0.18
Excluding NVDA	-0.08	-0.49	-0.72	-0.05	0.01	0.04	-0.09	-0.14
Excluding TSLA	-0.67	-0.87	-1.08	0.02	0.16	0.07	-0.09	-0.13
Excluding All Mega Caps	-3.88	-3.37	-7.09	-2.61	-2.68	-0.03	-1.45	-1.82
S&P 500 Standard Dev.	13.0%	8.9%	29.8%	12.5%	13.0%	4.9%	12.3%	11.1%

\*Year-to-date data as of February 28, 2022.

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# Know What You Own:

## ETFs and Mutual Funds with The Most Mega Cap Stock Exposure

As discussed in *The Real Impact of Mega Cap Stocks on Your Portfolio*, known or unknown to the individual, even the more conservative investor in a Sample 60/40 Portfolio is 7.4% exposed to the Mega Cap Stocks. At an 80% equity and 20% fixed income allocation, that concentrated exposure rises to 10.0%.

In a world where we all enjoy the convenience and interchangeability that mutual funds and ETFs offer, “knowing what you own” has become increasingly difficult. As such, the ubiquity of Mega Cap Stocks has so far tripped few alarms.

Using the YCharts Fund Screener, 100 passive and 78 active funds that count eight of the Mega Cap Stocks among their Top 25 Holdings—**Apple (AAPL)**, **Microsoft (MSFT)**, **Alphabet (GOOG/L)**, **Amazon (AMZN)**, **NVIDIA (NVDA)**, **Tesla (TSLA)**, and **Meta Platforms (FB)**—were identified. (Netflix has since fallen out of the pack of largest US companies, and popular passive ETFs in turn).

Of those 178 mutual funds and ETFs, 60 (37 passive, 23 active) have a combined Mega Cap Stocks exposure of 40% or more, and the concentration is greater than 50% for 15 funds (11 passive, 4 active).



## Which mutual funds & ETFs have the most concentrated positions in Mega Cap Stocks?

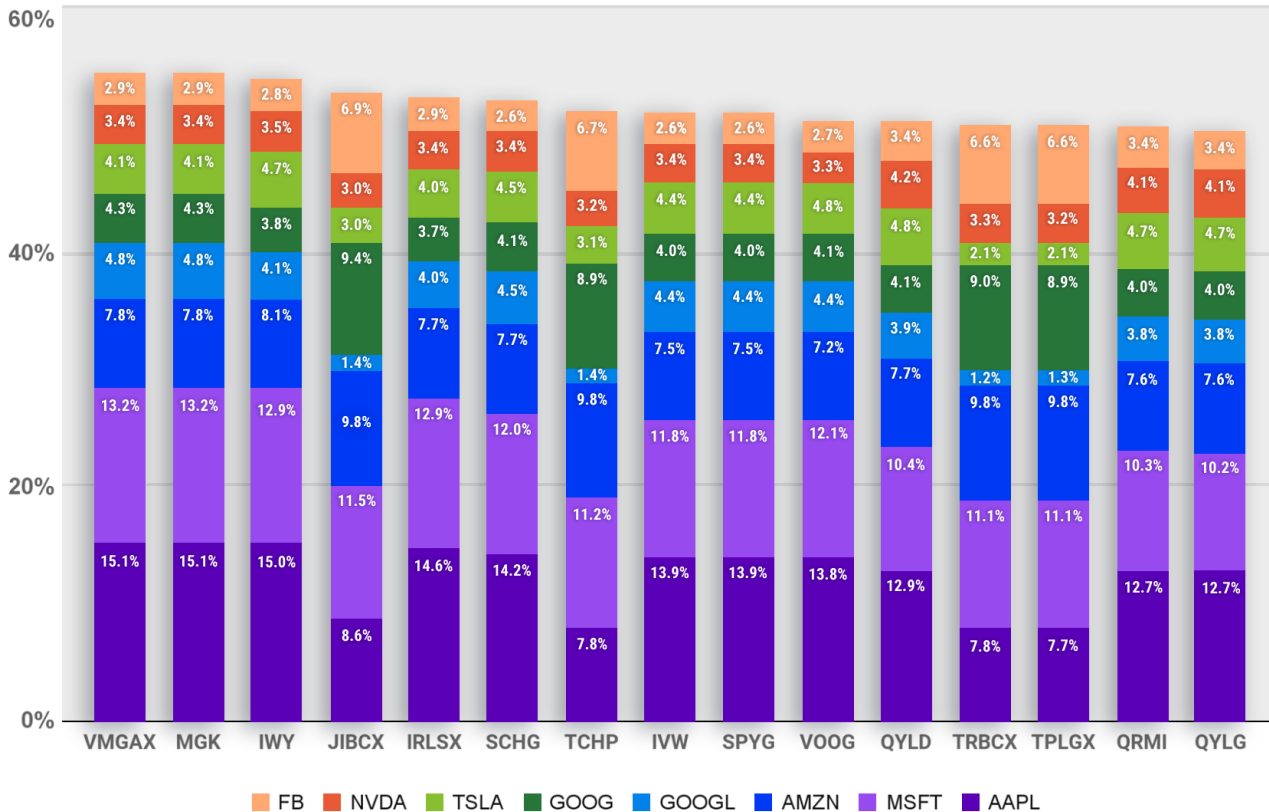
Of the over 77,000 funds available in YCharts' **fund universe**, these 15 mutual funds and ETFs (11 passive and 4 active) stand apart by carrying a combined exposure to Mega Cap Stocks of 50% or more.

Notably, the growth-focused spinoffs of S&P 500 index-tracking stalwarts **SPY** and **VOO**, SPDR Portfolio S&P 500 Growth ETF (**SPYG**) and Vanguard S&P 500 Growth ETF (**VOOG**) both made this list, at 52.0% and 51.4% respectively. The Vanguard Mega

Cap Growth Index Institutional (**VMGAX**) mutual fund topped the list, with 55.6% invested in the eight Mega Cap Stocks.

Depending on your personal opinion and what clients might request, these mutual funds and ETFs ought to be noted for their seriously heavy Mega Caps exposure, whether you view that as a good or bad thing.

### Mutual Funds & ETFs - 50% or More Invested in Mega Cap Stocks



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## Passive Mutual Funds & ETFs

- Vanguard Mega Cap Growth Index ([VMGAX](#))
- Vanguard S&P 500 Growth ETF ([VOOG](#))
- SPDR® Portfolio S&P 500 Growth ETF ([SPYG](#))
- Global X NASDAQ 100 Covered Call ETF ([QYLD](#))
- iShares S&P 500 Growth ETF ([IVW](#))
- Global X Nasdaq 100® Covered Call & Growth ETF ([QYLG](#))
- Schwab US Large-Cap Growth ETF ([SCHG](#))
- Global X NASDAQ 100® Risk Mngd Inc ETF ([QRMI](#))
- Vanguard Mega Cap Growth ETF ([MGK](#))
- iShares Russell Top 200 Growth ETF ([IWY](#))
- Voya Russell Large Cap Growth Idx Port S ([IRLSX](#))

## Active Mutual Funds & ETFs

- T. Rowe Price Instl Large Cap Core Gr ([TPLGX](#))
- T. Rowe Price Blue Chip Growth ([TRBCX](#))
- T. Rowe Price Blue Chip Growth ETF ([TCHP](#))
- JHancock Blue Chip Growth 1 ([JIBCX](#))



## How do active and passive funds compare in terms of Mega Cap Stocks exposure? How are their performance and risk affected?

Considering the nature of active and passive investing, both strategies—and the mutual funds and ETFs that implement them—seem bound to the fates of Mega Cap Stocks.

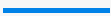
As they are some of the largest stocks in the US and the world, passive funds that track popular equity indices must carry a large weighting to Mega Cap Stocks. Active managers, on the other hand, face a tough decision in pursuit of outperforming their benchmark and optimizing active share (a measure of how much a portfolio's holdings differ from its benchmark's) within the strategies they manage.

A comparison of active and passive funds illustrates to what degree the inclusion or exclusion of Mega

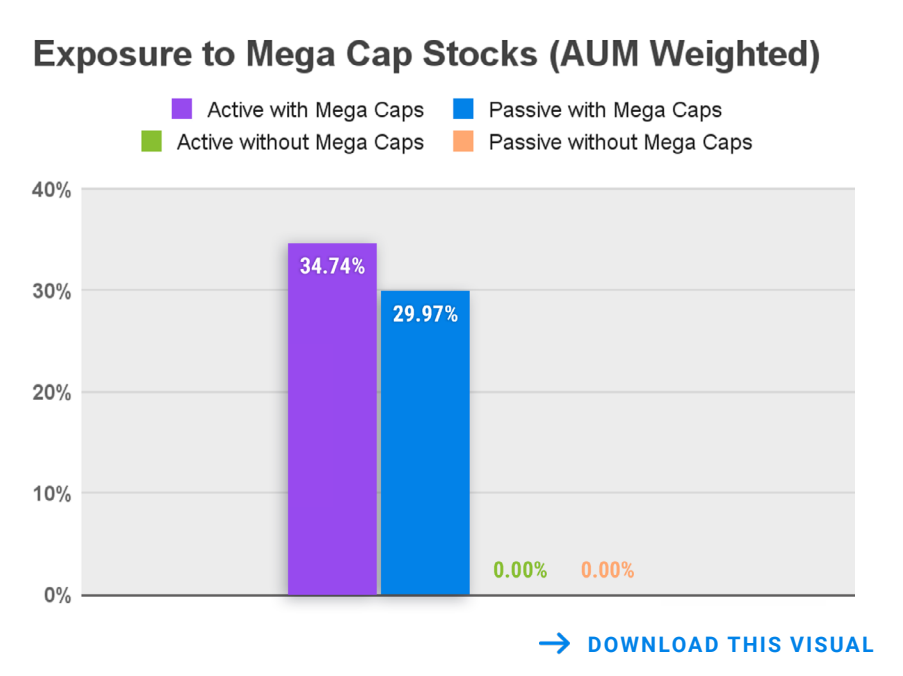
Cap Stocks affects important fund metrics like expense ratio, performance, drawdown, and standard deviation.

**Click any of the four fund groupings to view them in the YCharts Fund Screener:**

- Active Funds - with exposure to all Mega Cap Stocks
- Passive Funds - with exposure to all Mega Cap Stocks
- Active Funds - with no exposure to any Mega Cap Stocks
- Passive Funds - with no exposure to any Mega Cap Stocks



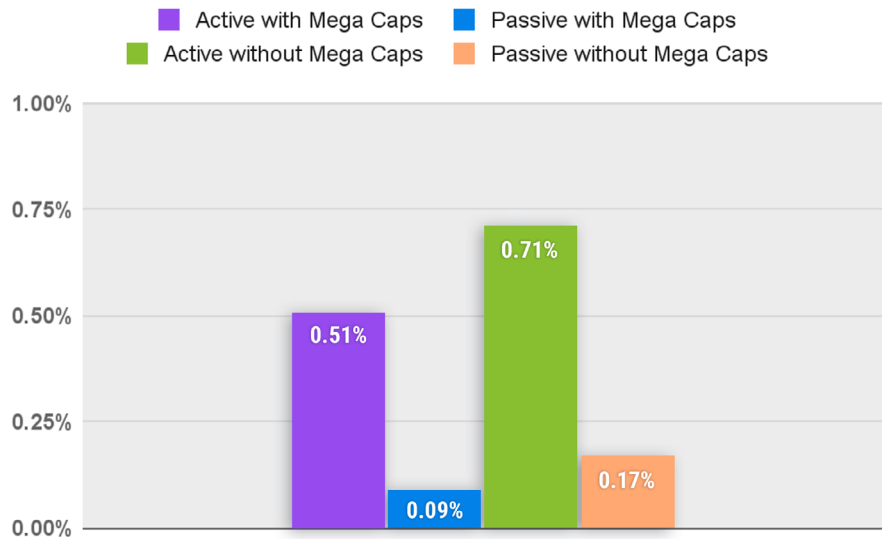
Interestingly, the 78 active funds with all eight Mega Cap Stocks in their top holdings carry more exposure to Mega Caps than their 100 passive counterparts, on an AUM-weighted average. While passive funds are obligated to invest heavily in the Mega Caps, the typical active manager has elected to willingly do the same.





On an AUM-weighted average, investors pay higher fees for mutual funds and ETFs that avoid Mega Cap Stocks than they do for strategies that hold all eight Mega Caps. Most expensive, with a 0.71% expense ratio on average, are the 1,873 active funds without any Mega Cap Stock exposure

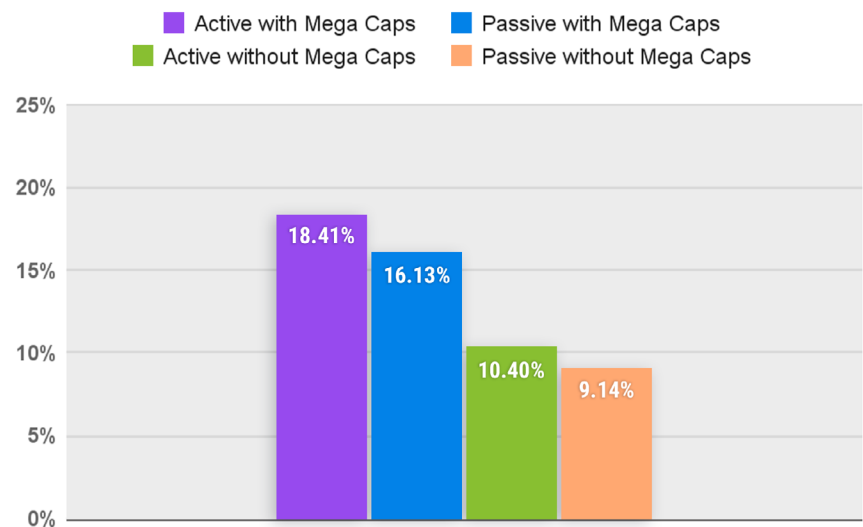
### Expense Ratio (AUM Weighted)



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Funds including the eight Mega Caps in their top holdings, and especially the active variety, have enjoyed greater annual performance (on AUM-weighted average, and as of February 28, 2022) than strategies that avoid the Mega Caps entirely. Indeed, the yearly performance of active funds with Mega Cap exposure, 18.4%, is more than 2x the 9.1% that passive funds with no Mega Cap exposure have delivered.

### Annualized 5 Year Total Return (AUM Weighted)

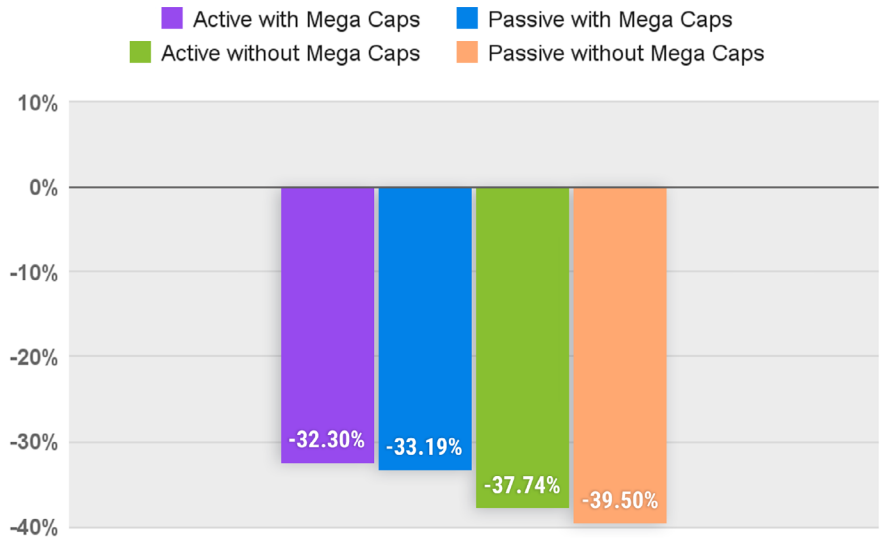


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When investigating these fund groupings through the lens of max drawdown and standard deviation, the funds with zero Mega Cap Stock exposure look surprisingly more risky than funds that do carry Mega Cap Stocks, on an AUM-weighted average. Particularly for passive funds, avoiding Mega Cap exposure resulted in a standard deviation that was 283 basis points greater on an AUM-weighted basis.

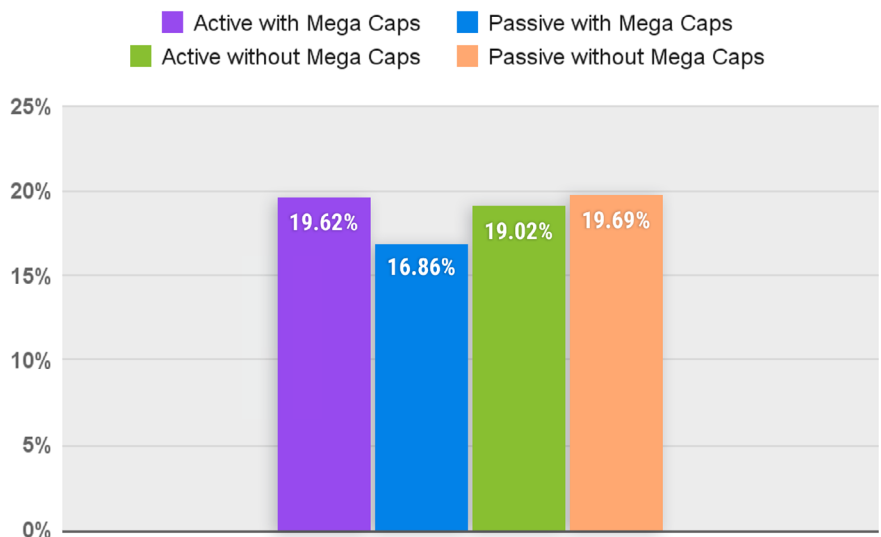
This may be due in part to the presence of small and mid-cap funds among the 1,873 active and 850 passive funds that comprise the sans-Mega Cap Stock groupings. However, active managers' freedom to move in and out of positions could also play a role in limiting drawdowns.

### Max Drawdown, Last 5 Years (AUM Weighted)



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### Annualized 5 Year Std Dev (AUM Weighted)



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	Active	Passive
<b>With Exposure to All 8 Mega Caps</b>	<p>AUM-weighted Exposure: <b>34.74%</b></p> <p>AUM-weighted Expense Ratio: <b>0.51%</b></p> <p>AUM-weighted Annlzd Performance: <b>18.41%</b></p> <p>AUM-weighted 5Y Max Drawdown: <b>32.30%</b></p> <p>AUM-weighted 5Y Annlzd Standard Deviation: <b>19.62%</b></p> <p><a href="#">View These Funds in YCharts - 78 funds*</a></p>	<p>AUM-weighted Exposure: <b>29.97%</b></p> <p>AUM-weighted Expense Ratio: <b>0.09%</b></p> <p>AUM-weighted Annlzd Performance: <b>16.13%</b></p> <p>AUM-weighted 5Y Max Drawdown: <b>33.19%</b></p> <p>AUM-weighted 5Y Annlzd Standard Deviation: <b>16.86%</b></p> <p><a href="#">View These Funds in YCharts - 100 funds*</a></p>
<b>With no Exposure to any of the 8 Mega Caps</b>	<p>AUM-weighted Exposure: <b>0.00%</b></p> <p>AUM-weighted Expense Ratio: <b>0.71%</b></p> <p>AUM-weighted Annlzd Performance: <b>10.40%</b></p> <p>AUM-weighted 5Y Max Drawdown: <b>37.74%</b></p> <p>AUM-weighted 5Y Annlzd Standard Deviation: <b>19.02%</b></p> <p><a href="#">View These Funds in YCharts - 1873 funds*</a></p>	<p>AUM-weighted Exposure: <b>0.00%</b></p> <p>AUM-weighted Expense Ratio: <b>0.17%</b></p> <p>AUM-weighted Annlzd Performance: <b>9.14%</b></p> <p>AUM-weighted 5Y Max Drawdown: <b>39.50%</b></p> <p>AUM-weighted 5Y Annlzd Standard Deviation: <b>19.69%</b></p> <p><a href="#">View These Funds in YCharts - 850 funds*</a></p>

\*Figures are based on funds for which all data points were available. Funds in the YCharts Screener links above that lacked sufficient historical data were not included in AUM-weighted calculations.

# Conclusion

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The Mega Cap Stocks in this study—**Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, Meta Platforms, and Netflix**—have become a bit of a Catch-22. While it may be concerning that just seven companies (Netflix not being what it once was) comprise such a large percentage of even a well-diversified portfolio, it's impossible to ignore the role these stocks have played for years, driving growth within those same portfolios.

This analysis shows that concentration in Mega Caps is a common phenomenon across major market indices, mutual funds and ETFs, and investor portfolios. Further, we've revealed that risk and return (by way of performance, drawdowns, and standard deviation) all hinge on the short and long-term fates of these stocks.

Surely, investing a significant portion of your nest egg in these stocks is neither a good nor bad thing; it just is. The appropriate course of action is up to advisors and their clients.

For those in search of greater returns, and who see the Mega Cap Stocks as a viable path to achieving them, this research may serve as a guidepost. If one chose to bet big on Mega Caps, putting 5% of your portfolio in Microsoft, Amazon, Netflix, or Alphabet has historically improved performance with the least impact on portfolio risk metrics. More specifically, investing 5% of a 60/40 Portfolio in an equal-weight basket of all the Mega Cap Stocks would have improved performance by more than 160 basis points per year with virtually no impact on portfolio risk.

At least for the S&P 500 index, the Mega Cap Stocks have been a difference-maker in terms of performance and risk. In every calendar year between 2015 and 2021, the nine Mega Caps (yes, even Netflix) have lifted the S&P 500 higher and hypothetically excluding them all from the index would have cut performance in half. If these companies did not exist and had not grown with the pace and magnitude they've exhibited, who knows where today's investors would be.

All in all, both investors and advisors alike may have different perspectives on the worthwhileness of Mega Cap Stocks' heightened risk and reward. Hopefully, this analysis and its findings can answer questions that clients and advisors are asking, and will enable you to make smarter investing decisions going forward.



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