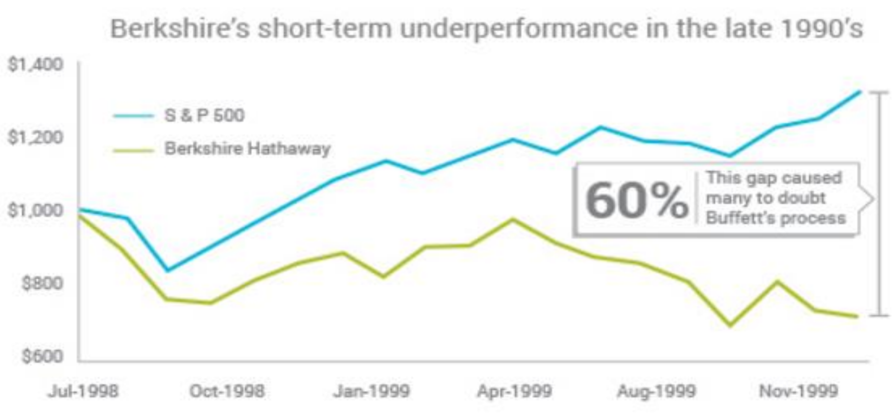
Comfort with underperformance in order to outperform.

Outperformance isn't easy to realize because underperformance isn't easy to sit through. However, the best investors in the world know that being different and therein underperforming frequently is required to earn the chance of outperformance.
Frequent underperformance is painful, but remind yourself the best investors view it as a feature, not a bug of investing. You should too.

Ask anyone off the street to name a great investor and chances are you'll hear Warren Buffett---often held up as the paragon of investing success. But what if I told you he spent more time ***underperforming*** the market than he did beating it? So one of the things I wanted to look at was let's look at the best performing managers over a long period of time, Berkshire Hathaway, George Soros, Bridgewater, and whatnot. The theory is that they must have done something that other people aren't comfortable doing.

And one of the things that people are very uncomfortable doing is underperforming their benchmark either frequently or for an extended period of time. And what we found was very interesting. When I looked at some of the best track records out there, they underperformed the S&P 500 or 60/40 portfolio most of the time. And Berkshire Hathaway is a glaring example. If you look at Berkshire Hathaway on a daily, weekly, monthly, quarterly, or six-month basis over its entire history, an investor in Berkshire Hathaway would have underperformed the S&P 500 more than half the time. But despite that, an investor in Berkshire Hathaway would have made tremendously more money than an investor in the S&P 500.

The key factor to investing: a willingness to be different than the market and then being able to stick with your strategy during periods of underperformance. Again, take Buffett as an example. In the late 90's during the tech bubble he was massively underperforming and being ridiculed as a result. Take a look…



Source: Longboard.com

Every valid investment strategy goes through periods of underperformance (relative), or drawdowns (absolute). The question is how you deal with it. One key characteristic of frustrated investors is that they jump from strategy to strategy. The first sign of weakness forces these weak hands to jump ship at just the wrong time. In short, following a strategy is easier said than done.

Fear is the most critical, functional cog in the investing machine. It's got to remain present and front-of-mind in order for there to be any future upside for investors to capture. Long-term investors should cheer when fear is reintroduced into the markets.

Ben Carlson at A Wealth of Common Sense also notes how our fear of losses, or loss aversion, affects our ability to invest successfully. He writes:

> *Crashes, corrections, drawdowns, losses, system resets or whatever you want to call them are a feature of the financial markets, not a sign that they are broken. These things have to happen every once and a while for the system to function properly and wash out the excesses. It makes sense to learn from them and you definitely have to mentally prepare yourself for dealing with losses. But the infatuation with down markets can be taken too far when loss aversion begins to cloud your judgment.*

The price of a long-term perspective, in that sense, is sometimes short-term turmoil.

> *My main point is this: every valid strategy is going to have some periods of underperformance. Don't give up on your strategy because of that; you are likely to give up near the point of maximum pain, and miss the great returns in the bull phase of the strategy.* - ***David Merkel***

The challenge is in following through with the strategy through thick and thin. There is no investment strategy that doesn't experience periods of underperformance.

The biggest problem is that recent history has shown fewer double-digit losses, but they're occurring in greater magnitude. Here's the breakdown of double-digit losses on the S&P 500 by decade:

	Number of Double Digit Drawdowns	Average Losses
1930s	8	-38.8%
1940s	6	-20.6%
1950s	5	-15.6%
1960s	5	-21.1%
1970s	8	-17.6%
1980s	4	-23.0%
1990s	2	-19.6%
2000s	3	-40.2%
2010s	2	-17.7%

Double-digit losses and bear markets are the rule, not the exception. The 1990s was the only decade that didn't see at least one 20% pullback (and both were very close to that mythical bear market definition that everyone pays attention to for some reason).

In some ways maybe it's a good thing that the memories of past market crashes stay with us for so long. Although more crashes are guaranteed to continue into the future, it's possible the sting from the previous losses can help keep investor emotions from getting too far out of control again so quickly.

And the hope is that investors learn about themselves and their behavior during turbulent markets. But I think investors and the media can take their fixation on "abnormal" market events too far.

Crashes, corrections, drawdowns, losses, system resets or whatever you want to call them are a feature of the financial markets, not a sign that they are broken. These things have to happen every once and a while for the system to function properly and wash out the excesses.

It makes sense to learn from them and you definitely have to mentally prepare yourself for dealing with losses. But the infatuation with down markets can be taken too far when loss aversion begins to cloud your judgment.

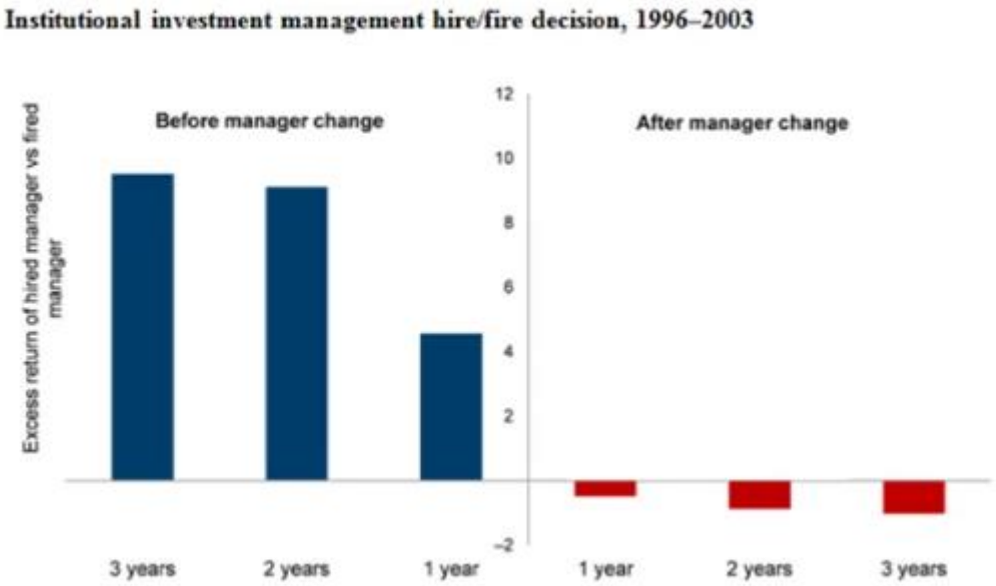
Unknown or secret strategies aren't plentiful. There isn't some holy grail of investing to be found that magically delivers alpha (i.e., outperformance). What matters is having enough confidence in your strategy that you can stick with it through various market cycles. As Brendan Mullooly recently wrote, "If your investment strategy is based upon strong evidence (I hope it is!), you need to hang in there."

Clearly for individual investors, sticking to your strategy is paramount to success.

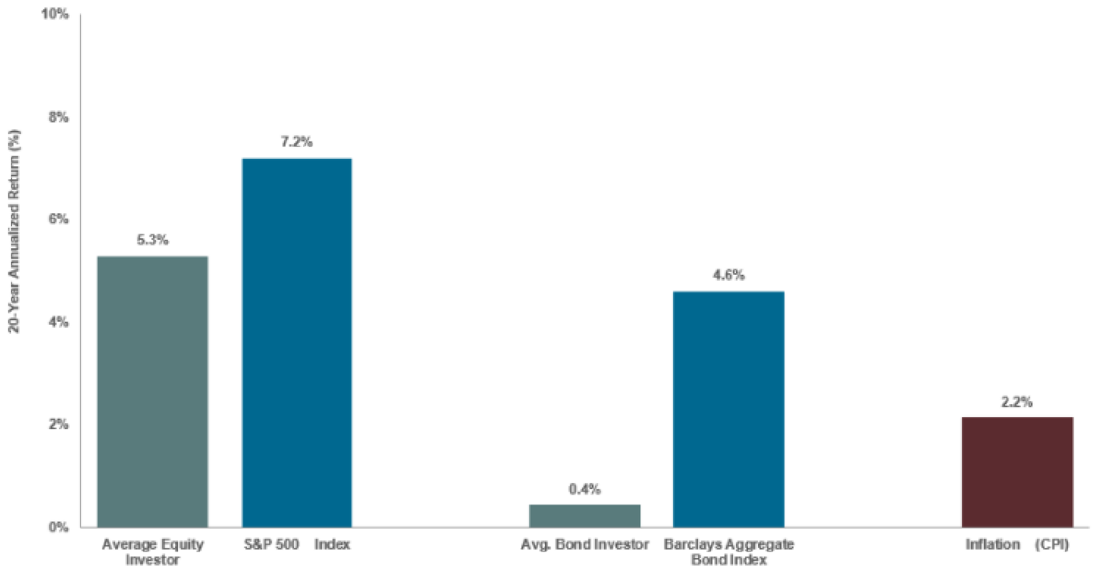
But it's not just retail investors that fail in maintaining their strategy over the long run. Professional investors make the same mistakes as well.

Institutional Investment Managers Don't Stick to Their Strategy Either

Professional investors are just as impatient and backward looking as individual investors. In a 2008 study published in the Journal of Finance, we see that on average institutional (i.e., professional) investors allocated to managers with excess returns in the prior three years. The problem is, after the manager change the excess performance turns into a performance drag—clear evidence of performance chasing, impatience and not sticking with one's strategy.



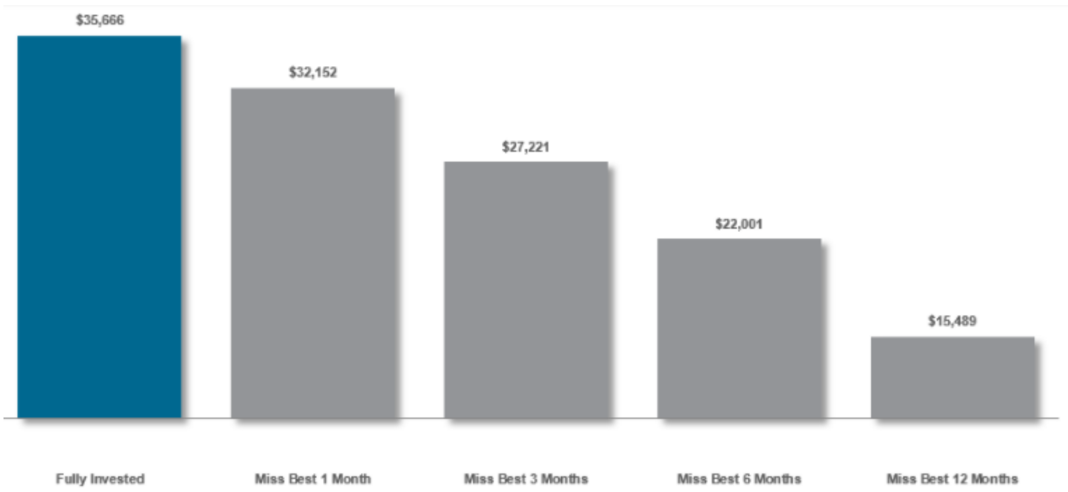
The S&P 500 returned greater than 7% between 1997 and 2017 – yet the average investor didn't fare nearly as well (see Chart 1). Over-trading, ill-advised market timing, spur-of-the-moment decision-making and more have contributed to this phenomenon. While ongoing portfolio management can be beneficial (think asset allocation resets, or active management in certain areas), large or frequent changes are often detrimental, particularly when they're motivated by emotion. To quote famed economist Eugene Fama, "Your money is like a bar of soap – the more you handle it, the less you'll have."



Source: Dalbar, Inc. "Quantitative Analysis of Investor Behavior, Advisor Edition," April 2018.

Timing the market – the strategy of buying a security at its low and selling at its peak – requires near-perfect foresight to succeed. To do it effectively, you have to be right twice – not only when to get in ("buy low"), but when to get back out ("sell high").

The other key factor is simply the concentration of market gains. As seen in Chart 2, missing just a handful of the best days is enough to significantly lower your portfolio's performance. While no investor would have bad enough luck to miss just the best days, weeks or months, the point remains: Timing the market is incredibly difficult to do with regularity. The best way to ensure that you capture the all-important up days is to stick to your plan through the panic-inducing selloffs and remain invested for the long-term.



Year-in and year-out, different asset classes and investment styles shine as the market reacts to ever-changing conditions. As you can see, there have been no consistent winners – the top asset class in 2018, Cash and Cash Equivalents, was the worst-performing asset class in 2019. The fact of the matter is, the financial market's tendency to revert to the mean often turns last year's winners into next year's losers.

This pattern holds across every investable asset you could imagine. Industrial metals, emerging market countries, agricultural commodities – you name it.

Star rating and performance predictability

A natural result of the performance distribution is that investors would rather invest in winning funds than losing funds. And it's during the selection process for these winning funds that investors often turn to rating systems. Such systems rate the available funds based on one or more performance metrics that categorize fund results as ranging from poor to exceptional.

The question, therefore, is whether such rating systems provide any tangible performance information to investors going forward. This question is not new, and the predictive power of the Morningstar Rating system has been explored before:

Average fund statistics for 36 months following Morningstar Rating: June 30, 1992, through August 31, 2009

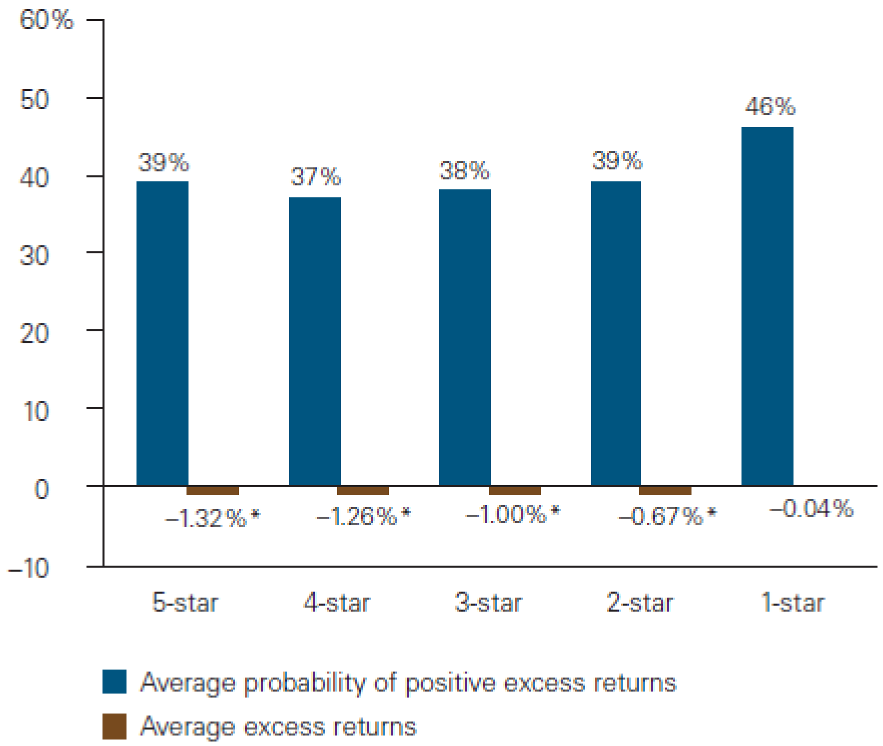


Figure 3 shows that, on average, 39% of funds with 5-star ratings outperformed their style benchmarks for the 36 months following the rating, while 46% of funds with 1-star ratings outperformed their style benchmarks for that period. The figure also shows the average 36-month excess returns (versus the funds' style benchmarks) over time, based on the median fund in each rating bucket. Here the top-rated funds are shown to have actually generated the lowest excess returns across time, while the lowest rated funds generated the highest excess returns.

Also of interest, the average excess returns across most buckets were significantly negative. Clearly, regardless of whether we look at the likelihood of outperforming or the magnitude of excess returns, investors, on average, have not benefited from basing their investment decisions solely on historical quantitative performance metrics.

The financial industry generally places more emphasis on style than substance.

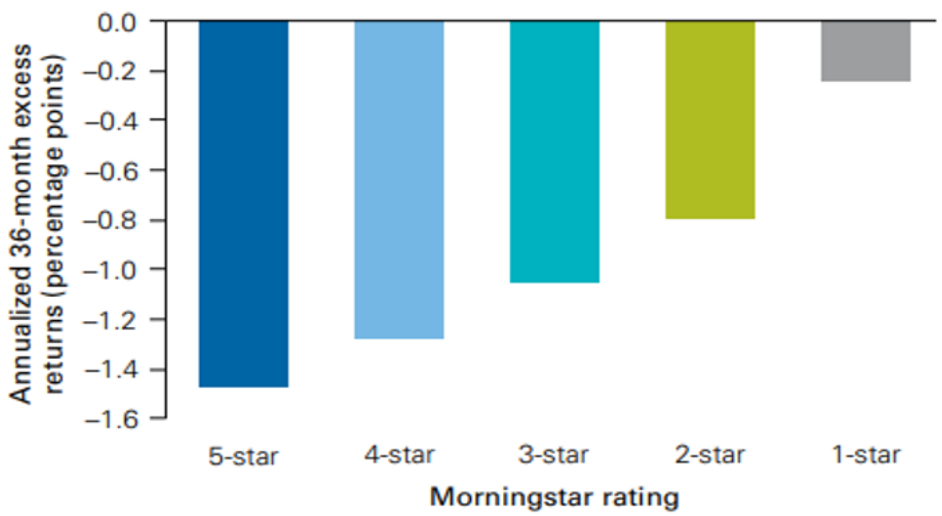
Advisor alpha increases significantly as the focus shifts to managing client behaviour as opposed to selecting great past performance.

Positive ratings lead to strong cash flows, even though the ratings are based on past-performance data with little predictive value.

Reliance on past performance can be a useful decision heuristic for many life decisions. Because the process has served us well in many areas of life, it's only natural for investors to apply it to investment decision-making. However, the past-performance heuristic is a generally unproductive way to choose investments, mainly because there are too many independent variables in investing whose initial conditions can change dramatically over time.

With investment, time is of the essence, but patience and discipline are more so.

Subsequent 36-month excess return after receiving Morningstar rating



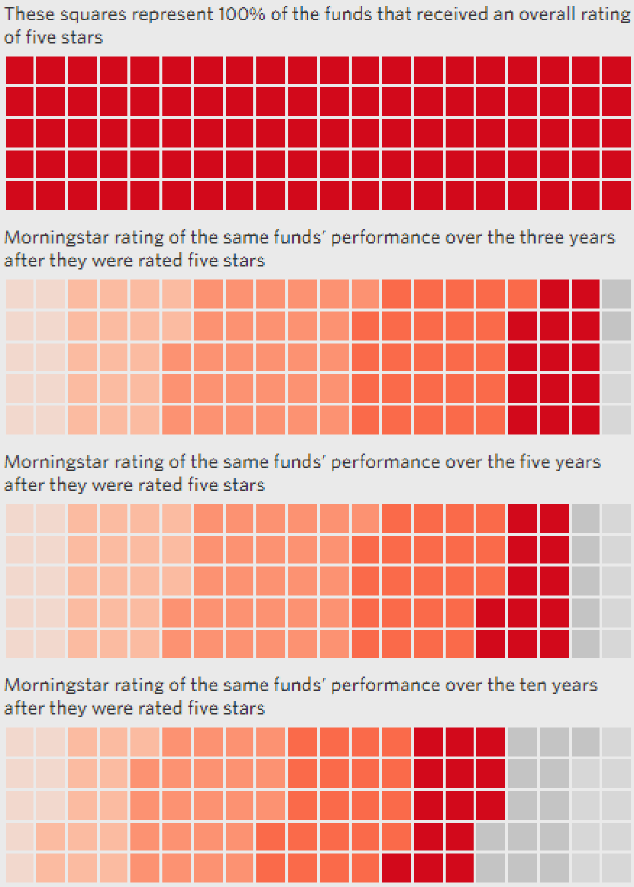
This clearly shows that higher rated funds tend to underperform their peer group in the subsequent 3 year. 5 star rated funds also attract the highest flows after receiving the star rating. This seems counter intuitive.

HOW FIVE-STAR FUNDS PERFORMED OVER TIME

For every fund given an overall rating of five stars, The Wall Street Journal looked at future Morningstar ratings to assess how the fund performed.

One Star | Two Stars | Three Stars | Four Stars | Five Stars | Merged | Liquidated

Of funds with a **five-star rating**, three years later only 14% had performed at a five-star level.



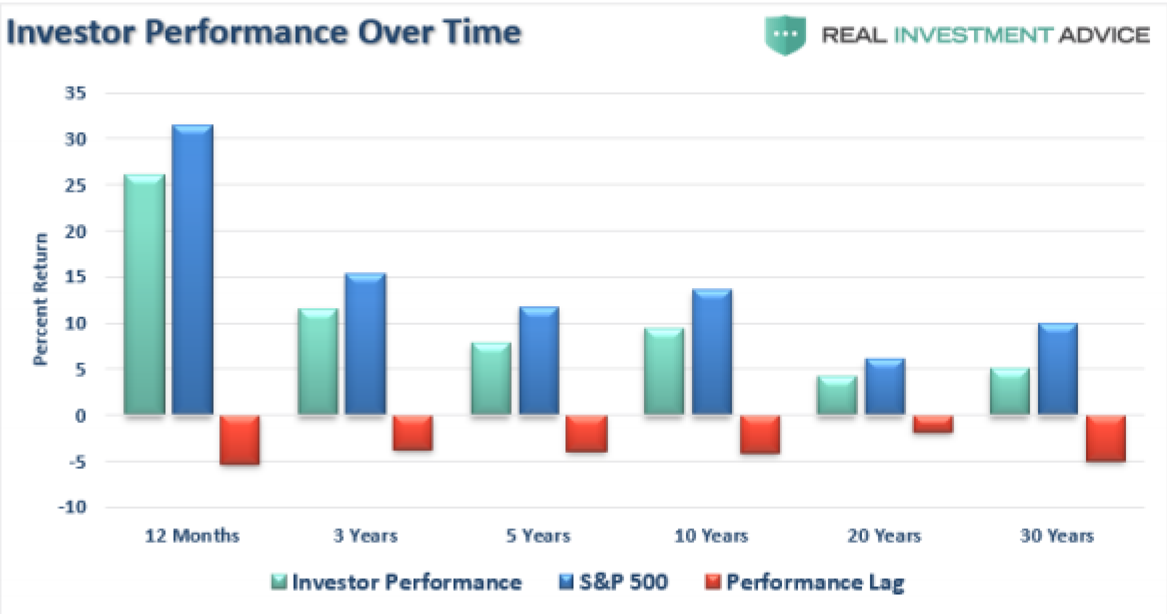
Notes: In select charts, the threshold for rounding has been adjusted to ensure the sum of whole integers will equal an even 100. Please see the methodology for precise figures. Funds rated by Morningstar can have up to four ratings: a three-year rating, a five-year rating, a 10-year rating, and an overall rating that is based on a combination of the others. Read the methodology.

DALBAR 2020 Report – The Behavior Gap

	Average Equity Fund Investor (%)	Average Fixed Income Fund Investor (%)	Average Asset Allocation Fund Investor (%)	S&P 500 (%)	Bloomberg-Barclays Aggregate Bond Index (%)	Inflation (%)
30 Year	5.04	0.38	2.29	9.96	5.91	2.40
20 Year	4.25	0.47	2.54	6.06	5.03	2.14
10 Year	9.43	0.63	4.79	13.56	3.75	1.75
5 Year	7.79	0.35	3.88	11.70	3.05	1.82
3 Year	11.50	1.08	5.91	15.27	4.03	2.10
12 Month	26.14	4.62	15.36	31.49	8.72	2.29

Investor behaviour trumps market savvy in driving long-term outcomes. Investors do not remain invested in the funds that they selected, leading to perennial underperformance of the index and also of the funds the were initially invested with. This has been a clear trend that holds pattern.

The graph below also reflects this reality – DALBAR stats.



Rolling Asset Class Returns, 2010–2019

Annual Returns

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Small Cap 26.9%	Municipal Bonds 10.1%	Int'l 17.9%	Small Cap 38.8%	Large Cap Value 13.5%	Large Cap Growth 5.7%	Small Cap 21.3%	Large Cap Growth 30.2%	Cash 1.9%	Large Cap Growth 36.4%
Mid Cap 25.5%	Taxable Bonds 7.8%	Large Cap Value 17.5%	Mid Cap 34.8%	Mid Cap 13.2%	Municipal Bonds 3.3%	Large Cap Value 17.3%	Int'l 25.0%	Municipal Bonds 1.3%	Mid Cap 30.5%
Satellite 19.5%	Large Cap Growth 2.6%	Mid Cap 17.3%	Large Cap Growth 33.5%	Large Cap Growth 13.1%	Taxable Bonds 1.1%	Mid Cap 13.8%	Mid Cap 18.5%	Taxable Bonds 0.0%	Large Cap Value 26.5%
Large Cap Growth 16.7%	Large Cap Value 0.4%	Small Cap 16.4%	Large Cap Value 32.5%	Equally Weighted 6.1%	Cash 0.1%	Satellite 12.5%	Small Cap 14.6%	Large Cap Growth -1.5%	Small Cap 25.5%
Large Cap Value 15.5%	Cash 0.1%	Large Cap Growth 15.3%	Int'l 22.8%	Municipal Bonds 6.1%	Int'l -0.8%	Equally Weighted 8.4%	Large Cap Value 13.7%	Equally Weighted -5.0%	Int'l 22.0%
Equally Weighted 13.7%	Equally Weighted -0.2%	Satellite 11.9%	Equally Weighted 17.6%	Taxable Bonds 6.0%	Equally Weighted -1.3%	Large Cap Growth 7.1%	Satellite 13.6%	Satellite -7.7%	Equally Weighted 19.5%
Int'l 8.2%	Mid Cap -1.6%	Equally Weighted 11.6%	Cash 0.1%	Small Cap 4.9%	Mid Cap -2.4%	Taxable Bonds 2.7%	Equally Weighted 13.4%	Large Cap Value -8.3%	Satellite 17.5%
Taxable Bonds 6.5%	Small Cap -4.2%	Taxable Bonds 4.2%	Satellite -0.7%	Satellite 2.9%	Large Cap Value -3.8%	Int'l 1.0%	Municipal Bonds 5.4%	Mid Cap -9.1%	Taxable Bonds 8.7%
Municipal Bonds 4.6%	Satellite -5.3%	Municipal Bonds 4.2%	Municipal Bonds -2.6%	Cash 0.0%	Small Cap -4.4%	Cash 0.1%	Taxable Bonds 3.5%	Small Cap -11.0%	Municipal Bonds 7.5%
Cash 0.1%	Int'l -11.7%	Cash 0.1%	Taxable Bonds -2.0%	Int'l -4.9%	Satellite -10.5%	Municipal Bonds 0.3%	Cash 0.8%	Int'l -13.8%	Cash 2.3%

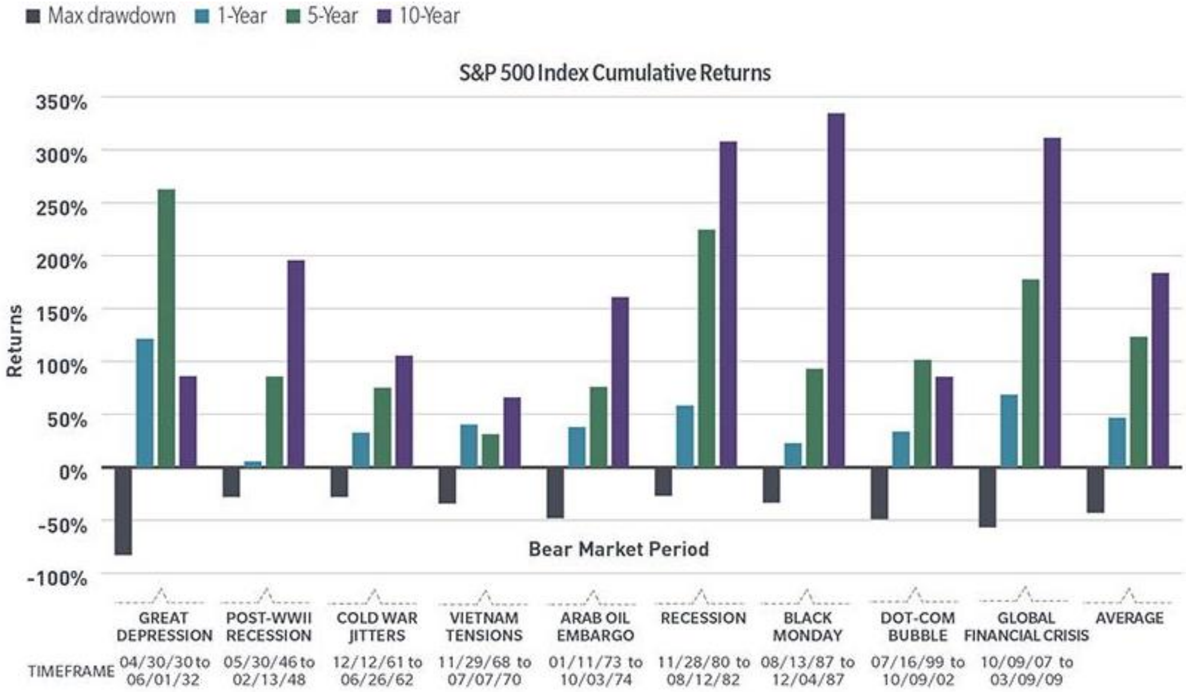
The Callan Periodic Table of Investment Returns

Annual Returns for Key Indices Ranked in Order of Performance (1999–2018)

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Non-U.S. Equity 27.92%	Real Estate 13.84%	U.S. Fixed Income 8.43%	Non-U.S. Fixed Income 22.37%	Emerging Market Equity 55.82%	Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%
Small Cap Equity 21.26%	U.S. Fixed Income 11.63%	High Yield 5.28%	U.S. Fixed Income 10.26%	Small Cap Equity 47.25%	Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Non-U.S. Equity 12.44%	Non-U.S. Fixed Income 4.39%
Large Cap Equity 21.04%	Cash Equivalent 6.18%	Cash Equivalent 4.42%	Real Estate 2.82%	Real Estate 40.69%	Non-U.S. Equity 20.38%	Non-U.S. Equity 14.47%	Non-U.S. Equity 25.71%	Non-U.S. Fixed Income 11.03%	Cash Equivalent 2.06%
Real Estate 8.87%	Small Cap Equity -3.02%	Small Cap Equity 2.49%	Cash Equivalent 1.78%	Non-U.S. Equity 39.42%	Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	High Yield -26.16%
Cash Equivalent 4.85%	Non-U.S. Fixed Income -3.91%	Emerging Market Equity -2.61%	High Yield -1.37%	High Yield 28.97%	Non-U.S. Fixed Income 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	Large Cap Equity 5.49%	Small Cap Equity -33.79%
High Yield 2.39%	High Yield -5.86%	Non-U.S. Fixed Income -3.75%	Emerging Market Equity -6.16%	Large Cap Equity 28.68%	High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%	Cash Equivalent 5.00%	Large Cap Equity -37.00%
U.S. Fixed Income -0.83%	Large Cap Equity -9.11%	Real Estate -3.81%	Non-U.S. Equity -15.80%	Non-U.S. Fixed Income 19.36%	Large Cap Equity 10.88%	High Yield 2.74%	Non-U.S. Fixed Income 8.16%	High Yield 1.87%	Non-U.S. Equity -43.56%
Non-U.S. Fixed Income -8.83%	Non-U.S. Equity -13.37%	Large Cap Equity -11.89%	Small Cap Equity -20.48%	U.S. Fixed Income 4.10%	U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%
		Non-U.S. Equity -21.40%	Large Cap Equity -22.10%	Cash Equivalent 1.15%	Cash Equivalent 1.33%	Non-U.S. Fixed Income -8.65%	U.S. Fixed Income 4.33%	Real Estate -7.39%	Emerging Market Equity -53.33%

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%
High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Non-U.S. Equity 24.21%	U.S. Fixed Income 0.01%
Real Estate 37.13%	Emerging Market Equity 18.88%	Non-U.S. Fixed Income 4.36%	Non-U.S. Equity 16.41%	Non-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%
Non-U.S. Equity 33.67%	High Yield 15.12%	Large Cap Equity 2.11%	Small Cap Equity 16.35%	High Yield 7.44%	Small Cap Equity 4.89%	Real Estate -0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Non-U.S. Fixed Income -2.15%
Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 0.10%	Large Cap Equity 16.00%	Real Estate 3.67%	High Yield 2.45%	Non-U.S. Equity -3.04%	Real Estate 4.06%	Non-U.S. Fixed Income 10.51%	Large Cap Equity -4.38%
Large Cap Equity 26.47%	Non-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Non-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%
Non-U.S. Fixed Income 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%
U.S. Fixed Income 5.93%	Non-U.S. Fixed Income 4.95%	Non-U.S. Equity -12.21%	Non-U.S. Fixed Income 4.09%	Emerging Market Equity -2.60%	Non-U.S. Fixed Income -3.09%	Non-U.S. Fixed Income -6.02%	Non-U.S. Fixed Income 1.49%	U.S. Fixed Income 3.54%	Non-U.S. Equity -14.09%
Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Non-U.S. Fixed Income -3.08%	Non-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.58%

Stock market returns following bear markets (1-, 3-, 5- and 10-year)



Source: FactSet. Daily data from 3 January 1928 through 31 March 2020. Bear market is defined as the period from a peak to trough, with at least a 20% decline in the S&P 500 Index price. Data in USD. Past performance is no guarantee of future results. It is not possible to invest in an index.