

# "Large Is Still Beating Small" Really?

We received the following Dividend.com Newsletter from one of our DIYers on April 1st. Doubting it was meant as an April Fools' joke, we provide our analysis:

## Large Is Still Beating Small

**The last couple of years have thrown some pretty big investing 'truths' out of whack.**

The biggest of which might have been the notion that smaller stocks tend to beat large-caps. While normally, there have been plenty of times where they flip-flop, the longer-term trend has always been small beats large. However, since about 2013, that hasn't been true.

And according to the investment professionals at Oppenheimer Funds, the shift could last a bit longer as trends continue to be favorable for larger stocks.

For investors, this poses an interesting question on just how to allocate their portfolios going forward. If Oppenheimer is correct, overweighting large-caps even more than normal could be warranted.

### A Big Affront to Academic Research

Eugene Fama and Kenneth French's famous work on returns set the stage for qualifying the so-called small-cap premium (**Size Factor**). The duo found that from 1926 to 2012, small-cap stocks [managed](#) to outperform large-cap stocks roughly 51% of the time. More to the point, small-caps managed to produce a cumulative extra return of 253%. This built upon their landmark paper from the 1990s that pretty much came to the same conclusion.

But lately, their work hasn't lived up to its former glory days.

Since about 2013, large-cap stocks have taken over in a big way. For four straight years – and currently working on a fifth in 2018 – large has managed to beat small. That's completely flipped the script on long-term trends. You can see by the following chart that the large-cap focused S&P 500 has managed to beat the small-cap benchmark Russell 2000 by a decent margin. (**As explained below, the S&P 500 should be compared to the S&P 600.**)



And the outperformance seems to hold true among the ‘value’ and ‘growth’ segments of each market capitalization. For example, small-cap growth stocks were up over 20% in 2017. However, large-cap growth stocks – driven by leaders like **Google** ([GOOG](#)) and **Amazon** ([AMZN](#)) – were [even bigger winners](#), surging more than 30% last year. (While growth stocks tend to beat value stocks while the market is climbing, they fail miserably when fear returns, as is once again being shown during the current correction, and over the long-term. **“The race is not always to the swift, nor the battle to the strong, but that's the way to bet.”** - Damon Runyon)

The question is why?

### Still in Place Trends

Analysts at Oppenheimer estimate that the answers to recent large-cap outperformance can be found on a few different avenues.

For starters, the perceived safety of larger firms has contributed significantly to their gains. We’ve been in the ninth inning of a very long economic recovery process for quite a long time. Historically, larger firms – thanks to size, balance sheets and economic moats – are able to navigate downturns much more easily than smaller ones. With the next recession being just around the corner – which has been going on for quite some time now – investors have naturally continued to flock toward large-caps for safety. (While it is true that we are one day closer to the "next recession" than we were yesterday, the claim that recession looms "just around the corner" without providing the ETA is likely, as once again shared below, to prove costly. **“If you spend more than 13 minutes analyzing economic and market forecasts, you’ve wasted 10 minutes.”** – Peter Lynch)

Secondly, the drop in the dollar has been great for larger firms. Typically, large-cap stocks have a more international focus and feature plenty of exports and international offices. That makes the dropping dollar – which has continued to sink in recent quarters – a big boon to their profits. They can benefit from rising international demand, whereas many small-caps are 100% domestically oriented. (The assumption here is that the dollar will continue to fall while U.S. interest rates are climbing faster than foreign rates. U.S. interest rates are climbing faster because the U.S. economy is projected to grow faster than most DM countries. Lack of domestic "demand" is not the concern; given the Republican tax cuts and omnibus spending bill, an overheating economy is. As we have previously shared, "the drop in the dollar has been great for" foreign stocks, and is why the trend, for now, continues to reward International diversification.)

These reasons, plus the availability of cheap credit and more favorable tax benefits, have only enhanced large-caps’ appeal over their smaller rivals. (The above referenced tax cuts actually favor "domestically oriented" companies.)

The real beauty is that these trends have only gotten better for larger stocks. (Not since January 26th. As of Friday, SPY, the S&P 500 ETF, is down 9.4%, while IJR, the S&P Smallcap 600 ETF, is down 4.5%)

Take credit, for example. Rising rates are causing debt to become more expensive. ...

And Oppenheimer’s research shows that this is the case. When the Fed starts raising rates, mature companies will benefit. Historically, large-caps have outperformed small-caps by an average of 1.8% in rising rate environments, as you can see from this graph from Oppenheimer’s research (which, once again, makes the error of comparing the S&P 500 to the Russell 2000, instead of the S&P 600)

## U.S. Treasury Yield Curve vs. U.S. Small / Large Caps Since 2010



Sources: Bloomberg, FRED, OppenheimerFunds, 7/31/17. Shaded areas denote flattening U.S. Treasury yield curve regimes. Past performance does not guarantee future results.

Source: Oppenheimer Funds

Then there are taxes to consider. While the overall corporate rate is now done – which will benefit smaller firms (as noted) – the repatriation tax benefit provides a huge upside for (a few) multinational-oriented large-cap stocks (depending on how the funds are invested, with stock buybacks being a Wall Street favorite).

Meanwhile, several other provisions in the tax plan benefit the larger-styled investments that big stocks make.

And we can't forget that recent bouts of volatility heighten the fact that we could be heading for a recession sooner rather than later. (There is no evidence that we are aware of that heightened volatility presages recession. "the stock market has predicted nine of the last five recessions." - Economist Paul Samuelson 50 years ago)

The safety of large-cap stocks will be in even greater demand. (On average, large-cap stocks will likely drop less than small-cap stocks during the next Bear Market. That doesn't make them safe in any meaningful sense of the word when fear reigns.)

### Betting Big

Given that the trends are still in place for large-caps to keep on beating smaller firms (Not only have large-caps not beaten small-caps "since about 2013" when properly measured, but both history and current "trends" support the Size Factor, especially when combined with the Value or Quality Factors.), the time to keep betting big is now (not if Capital Appreciation matters). There's a pretty good chance that you already have a large swath of your holdings in larger stocks – most people do. It could be prudent to bump that percentage up a few pegs to take advantage of the market caps' continued potential outperformance. Simply adding to your current holdings might be enough.

However, for those investors looking to add more of a strategic addition, the **Guggenheim S&P 500 Top 50 ETF (XLG)** or **iShares S&P 100 ETF (OEF)** make ideal plays. Each fund bets on the largest of the large and should benefit as the trend of larger-over-smaller keeps on going.

All in all, if Oppenheimer is right, large-cap stocks should continue to be the leaders going forward.

## Our thoughts

As we note on our website under Factors: "Size is one of the three original factors when Fama and French published their three-factor model in 1992 to explain stock returns. Over the long run, small capitalization stocks tend to beat their large counterparts." The S&P 500, Large and Mega (>\$100 Billion) Caps, is a subset of the S&P 1500, which is also comprised of the S&P MidCap 400 and S&P SmallCap 600. The S&P 1500 covers approximately 90% of the U.S. market capitalization. Unlike the Russell 2000, which is the Small Cap component of the Russell 3000, the S&P 600 & 400 are screened for Quality, while 1 of the 8 criteria for a stock to be included in the S&P 500 is financial viability. The Size Factor is clearly demonstrated by the relative performance of the S&P 600 and 400 to that of the S&P 500. Small (IJR, blue line) beats Mid (IJH, orange line), and both clobber Large (SPY, green line) since IJR's inception:



So how about since 2013:



As for the future, perhaps we are not "in the ninth inning of a very long economic recovery", since long economic recoveries are the norm following severe financial crises. Perhaps "the next recession" isn't "just around the corner", assuming you can even see the next "corner" from here. From Friday's Global Investment Strategy: "our base case remains that another global recession is still about two years away, which should keep the bull market in global equities intact." Does it really matter how long it will take to reach "the corner", since we are getting closer day by day? The answer is yes! We last shared this chart in December:



## Too Soon To Get Out

ANNUALIZED REAL RETURNS (%) PRIOR TO RECESSIONS	MONTHS PRIOR TO RECESSION					NON-RECESSION MONTHS
	13-TO-24 MONTHS	1-TO-24 MONTHS	7-TO-12 MONTHS	1-TO-12 MONTHS	1-TO-6 MONTHS	
S&P 500	Returns tend to be strong in the late stage of the business cycle...			...but don't overstay your welcome		
AVERAGE RETURNS POST-1950s	14.2	6.8	8.0	0.1	-7.8	10.1
JUL 1953 - MAY 1954	21.9	12.0	17.8	2.0	-13.8	14.7
AUG 1957 - APR 1958	15.8	7.1	-17.0	-1.6	13.9	19.3
APR 1960 - FEB 1961	31.3	16.8	6.6	2.2	-2.2	15.8
DEC 1969 - NOV 1970	13.4	-1.3	-11.0	-15.9	-20.7	5.8
NOV 1973 - MAR 1975	16.9	4.9	-11.3	-7.0	-2.7	6.2
JAN 1980 - JUL 1980	0.5	2.2	6.8	5.4	4.0	3.1
JUL 1981 - NOV 1982*	...	...	32.2	10.5	-11.2	4.0
JUL 1990 - MAR 1991	14.3	13.1	22.2	11.9	1.6	14.0
MAR 2001 - NOV 2001	8.9	-0.7	20.0	-10.3	-40.6	12.5
DEC 2007 - JUN 2009	11.6	7.6	13.6	3.6	-6.3	4.0

\* FIRST 2 COLUMNS OMITTED DUE TO OVERLAP WITH PREVIOUS RECESSION PERIOD.  
NOTE: MONTHLY RETURNS ARE ANNUALIZED AND DEFLATED BY THE CONSUMER PRICE INDEX; CALCULATIONS ARE BASED ON TOTAL RETURN INDEX.

When it comes to investing, Small provides the best ride, as detailed in the following Morningstar article, which we have edited:

## For Factor Investors, It Pays to Go Small

By Alex Bryan, CFA | 12-06-17

Tilting toward small-cap stocks alone isn't a great way to improve long-term performance. Small-cap stocks have historically offered a small edge over their larger counterparts, but that slight return advantage hasn't been much compensation for their higher risk and decade-long stretches of underperformance.

However, other factors, like value, momentum, and low volatility, have tended to work better among smaller stocks. Deliberately targeting small-cap stocks with these characteristics will likely be more fruitful than a broad-based approach to investing in a broader cross section of smaller firms.

The payoff to the value factor offers a stark illustration. Exhibit 1 shows the returns on 25 portfolios of U.S. stocks formed on the basis of stocks' size and book/price ratios (a measure of value, with larger values indicating relatively cheaper stocks). **As previously shared and detailed on HCM's website, there are better valuation metrics.** I've sourced this data from the French Data Library for the period from July 1963 through May 2017.

Each portfolio has roughly the same number of stocks and is market-cap-weighted, so the small-cap portfolios represent a smaller portion of the market than the large-cap portfolios. All portfolios are updated once a year at the end of June.

The column labeled "5–1" in Exhibit 1 shows the return spread between the portfolios of the cheapest and most-expensive stocks across five different size strata. So, for example, the cheapest fifth of U.S. large-cap stocks outpaced the most-expensive fifth by 1.93 percentage points annually, which isn't bad. But the return gap between deep-value and high-growth stocks increases dramatically as we move down the market-cap ladder.

To understand this performance pattern, it is important to understand the explanations for the value effect more broadly. Value stocks are thought to outperform either because they are riskier than their more-expensive counterparts and offer higher expected returns to compensate investors for that risk, or because they are mispriced. The risk-based explanation is plausible. Value stocks tend to have less-attractive business prospects than more richly valued stocks. That said, growth stocks--especially small-growth stocks--come with significant risks of their own, most notably the risk of failing to live up to the lofty expectations embedded in their prices.

During the sample period, the large-value portfolio did in fact exhibit greater volatility and a larger maximum drawdown than its growth counterpart. But the opposite was true of the small-value portfolios, as shown in Exhibit 2. This suggests that these value portfolios were less risky than their growth counterparts and that mispricing is the more likely driver of their higher returns. It's reasonable to believe that small-cap stocks are more prone to mispricing than large-cap stocks because they don't attract as much investor attention or analyst

coverage. Consequently, their prices may not reflect all publicly available information. However, we can't rule out the risk-based explanation for the value effect among small-cap stocks because risk can still be present without being realized. For example, even if a corporate borrower doesn't default on a loan, that outcome is still possible and investors must be compensated for that risk.

### Low Volatility

As is the case with value, the advantage of tilting toward low-volatility stocks has historically been the biggest among the smallest stocks, as Exhibit 3 illustrates. This table shows the returns on 25 portfolios of U.S. stocks sorted on size and volatility for the previous 60 days, updated monthly. The return spread between the least- and most-volatile fifth of U.S. large-cap stocks was 1.65 percentage points annualized from July 1963 through May 2017, but the corresponding figure among micro-cap stocks was 19.87 percentage points annually.

**Exhibit 1 Returns on Portfolios Sorted by Size and Book/Price**

	Low 1	2	3	4	High 5	5–1
Large	9.64	10.29	10.56	9.76	11.57	1.93
Mid	10.33	10.78	12.28	14.49	13.39	3.07
Small-Mid	8.44	13.05	12.97	14.71	16.21	7.78
Small	7.67	12.16	14.34	15.15	15.45	7.78
Micro	3.93	11.78	12.62	15.89	16.78	12.85

Source: French Data Library, analyst's calculations. Data from July 1963 to May 2017.

**Exhibit 2 Risk of Portfolios Sorted by Size and Book/Price**

	Standard Deviation (%)		Max Drawdown (%)	
	Low 1	High 5	Low 1	High 5
Large	15.9	18.5	52.0	59.4
Mid	20.3	19.6	66.6	70.1
Small-Mid	22.7	19.5	68.9	49.0
Small	24.8	20.8	74.6	67.1
Micro	27.3	20.7	84.0	66.3

Source: French Data Library, analyst's calculations. Data from July 1963 to May 2017.

The inverse relationship between stocks' size and the efficacy of the low-volatility effect likely stems from greater mispricing among smaller stocks. For instance, there may be greater lottery-seeking behavior among small-cap stocks, where investors overpay for volatile stocks that offer a small chance for a big payoff, because these stocks tend to offer greater upside potential than their larger counterparts. But that's not the whole story.

A regression analysis revealed that the low-volatility portfolios tended to favor cheaper and more-profitable stocks than their more-volatile counterparts. So, one of the reasons the low-volatility effect works the best among the smallest stocks is because it partially captures the value effect. Additionally, the low-volatility portfolios had greater exposure to the momentum factor (which has historically been associated with higher returns), and this gap was the widest among micro-cap stocks and the narrowest among large-cap stocks. This suggests that momentum contributed to the greater efficacy of the low-volatility strategy among the smallest stocks.

## Momentum

Momentum has also tended to offer the best returns among the smallest stocks, at least on paper, as Exhibit 4 shows. In practice, the transaction costs of this high-turnover strategy would eat a big chunk of these hypothetical returns, so a micro-cap momentum strategy isn't advisable. But this return pattern provides further support for the idea that there is greater mispricing among the smallest stocks in the market than there is among large caps.

Momentum likely arises because investors are slow to react to new information, causing prices to adjust more slowly than they should. Because smaller stocks don't attract as much attention as larger ones, it probably takes longer for new information to be reflected in their prices, which could explain why the returns to momentum are higher among smaller names. Once a trend is established, investors may pile into the trade, pushing prices away from fair value, leading to the long-term reversals associated with the value effect. So, this bigger momentum effect among small stocks is also consistent with a bigger value effect.

## Profitability

Unlike the other factors, profitability (investing in the most-profitable firms) worked almost as well among large-cap stocks as it did among the smallest stocks, as illustrated in Exhibit 5. It isn't obvious why this factor

**Exhibit 3 Returns on Portfolios Sorted by Size and Volatility**

	Low 1	2	3	4	High 5	5-1
Large	9.74	10.82	10.45	9.11	8.09	1.65
Mid	12.95	13.20	13.23	12.37	7.01	5.94
Small-Mid	13.78	14.21	15.30	13.67	6.14	7.65
Small	15.58	16.63	16.08	13.51	3.44	12.14
Micro	17.09	17.93	16.10	10.95	-2.78	19.87

Source: French Data Library, analyst's calculations. Data from July 1963 to May 2017.

**Exhibit 4 Returns on Portfolios Sorted by Size and Momentum**

	Low 1	2	3	4	High 5	5-1
Large	4.24	9.55	8.85	10.71	13.03	8.79
Mid	4.00	10.41	11.86	13.59	15.94	11.95
Small-Mid	4.68	10.80	12.48	13.20	17.55	12.86
Small	3.03	11.37	13.70	15.90	17.61	14.58
Micro	1.26	11.21	14.91	16.88	19.48	18.22

Source: French Data Library, analyst's calculations. Data from July 1963 to May 2017.

bucked the small-cap amplification pattern. However, it may have something to do with the fact that the largest stocks in the market tend to be the most profitable.

Highly profitable stocks tend to be less volatile and hold up better during market downturns than their less-profitable counterparts. So, if anything, it would be reasonable to expect these stocks to offer lower returns for their relative safety. Of course, there is always a risk that they could underperform, as they often do during strong market rallies.

**Exhibit 5 Returns on Portfolios Sorted by Size and Profitability**

	Low 1	2	3	4	High 5	5-1
Large	7.47	8.48	9.63	10.12	11.04	3.57
Mid	9.52	12.06	11.57	12.27	13.60	4.07
Small-Mid	8.70	13.08	12.66	12.72	14.61	5.90
Small	9.16	12.76	13.77	12.78	15.01	5.86
Micro	8.30	14.77	13.80	15.01	12.95	4.65

Source: French Data Library, analyst's calculations. Data from July 1963 to May 2017.

It is likely that mispricing across the market-cap spectrum contributed to this effect. For example, highly profitable stocks could become undervalued if investors do not fully appreciate the long-term sustainability of their earnings power. Or they may simply prefer riskier stocks that offer greater return potential, similar to the low-volatility effect. Yet, to the extent that the profitability and low-volatility effect arise from a common bias, it is a bit of a puzzle why the former wasn't also much bigger among the smallest stocks.

The U.S. results were consistent with the factor return patterns among international stocks. I ran a similar analysis using the global ex-U.S. portfolios formed on profitability, value, and momentum (low-volatility portfolios weren't available) from November 1990 through May 2017. Value and momentum worked much better among the smallest stocks than among the largest, while profitability only worked slightly better among the smallest stocks.

### Profiting From Small-Cap Factor Amplification

Although each of the factors examined here, apart from profitability, performed much better among small-cap stocks than among large ones, the vast majority of assets invested in factor strategies are in large-cap funds. It's true that large-cap strategies have greater capacity than their small-cap brethren and are less risky, generally making them better core holdings. And yes, transaction costs will likely create a bigger drag on a momentum strategy applied to small caps than to large caps. But the performance advantage from tilting toward factors like value and low volatility is nonetheless likely to be larger among small-cap stocks. ...

Bronze-rated PowerShares S&P SmallCap Low Volatility ETF (XSLV) (0.25% expense ratio), **which we use for clients**, offers clean exposure to stocks with low volatility. Each quarter, it ranks the stocks in the S&P SmallCap 600 Index by their volatility during the past 12 months and targets the least-volatile 120. It then weights these holdings by the inverse of their volatility, so that the least volatile stocks get the largest weightings in the portfolio. The fund has been successful at reducing volatility and downside risk, but it does take big sector bets from time to time, which may not always pay off.

For those who do want to profit from momentum in the small-cap arena, it would probably be best to get that exposure through a multifactor fund, like iShares Edge MSCI Multifactor USA Small-Cap ETF (SMLF) (0.30% expense ratio), **a fund we also use, and whose Morningstar Chart we show below**. This is because 1) it will have lower turnover than a stand-alone momentum fund, and 2) it should better diversify risk. This fund targets small-cap stocks with strong value, momentum, quality, and small size characteristics under constraints that



