

# Blue Chip Investing

*Exploiting the Rise  
of Passive Index Funds*



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# EXECUTIVE SUMMARY

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We examine the performance of stocks within domestic large stock indexes. We find that the largest companies in these indexes are penalized, especially in the Dow since 2000. We also find that smaller companies in these large stock indexes tend to outperform. We hypothesize that the rise of passive index-tracking funds plays a key role in both phenomena.

## Introduction

Decades ago, Benjamin Graham explained the stock market was like a voting machine in the short run. It tallied which companies were popular and unpopular based on investor sentiment. That sentiment or conviction was based on some sort of fundamental or technical rationale. In the long run, however, Graham said the stock market was like a weighing machine. It assessed the substance of a company's business performance; rewarding winners and punishing losers.

At least, that's the way the stock market used to work.

Now, the voting machine is out of whack due to the rise of passive index investing. Bill Ackman wrote in his January 2016 letter to Pershing Square shareholders<sup>1</sup> that 20% of every dollar invested in S&P 500 companies comes from passive index-tracking ETFs and mutual funds.<sup>2</sup>

The vast majority of these indexes (and the ETFs and mutual funds that passively track them) use market capitalization weighting ("cap weighting") schemes. As a result, the largest companies get the bulk of these passive inflows.

It's as if the stock market voting machine has been hit with a blizzard of crazy proxy votes. Passive index fund investors are not buying the largest companies because, based on some sort of technical or fundamental analysis, they like these huge companies best. Instead, passive index investors are buying the biggest companies simply because they are the biggest companies.

As demonstrated by Rob Arnott<sup>3</sup> and others, this is a terrible way to invest in most market environments. In our view, the rise of cap-weighted passive index inflows provides an exploitable opportunity for the blue chip investor.

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<sup>1</sup> January 26, 2016 William Ackman Letter to Pershing Square Shareholders at p.4; Available at: [assets.pershingsquareholdings.com/2014/09/Pershing-Square-2015-Annual-Letter-PSH-January-26-2016.pdf](https://assets.pershingsquareholdings.com/2014/09/Pershing-Square-2015-Annual-Letter-PSH-January-26-2016.pdf)

<sup>2</sup> Cap-weighted funds are very inexpensive to maintain, which contributes to their popularity.

<sup>3</sup> Arnott, Rob, *Why Cap-Weighted Indexing is Flawed*, (2013); Available at: [morningstar.com/cover/videocenter.aspx?id=613699](http://morningstar.com/cover/videocenter.aspx?id=613699)

## The Small Company Premium

Fama and French first wrote about the size premium in favor of smaller companies in 1992.<sup>4</sup> As luck would have it, shortly thereafter the cap-weighted SPY ETF beat the equal-weighted S&P 500 mutual fund (VADBX) every year from 1995 through 1999. The S&P 500 index beat the Russell 2000 small cap index every year from 1995 through 1998 and matched the Russell 2000 in 1999. Clearly, the largest companies in the S&P 500 outperformed smaller companies during the "go-go" late 1990s when: 1) momentum ruled<sup>5</sup> and 2) the advance-decline line began to falter after peaking in early 1998.<sup>6</sup>

In 2007, Fama and French clarified that the size premium really only works one-way: small companies becoming much larger.<sup>7</sup>

*The higher average returns of small-cap stocks are primarily a result of one type of migration: small-cap stocks that become big. Specifically, price appreciation moves a stock's market cap from below to above the NYSE median from one year to the next. Big-cap stocks that become small have strong negative average excess returns, but they contribute little to the size premium. This perhaps surprising result arises because, unlike stocks that move from small to big, stocks that become small account for tiny fractions of the market capitalization of big-cap portfolios.*

Thus, according to Fama and French, the size premium is actually a small company premium -- there is no appreciable large company penalty.

We disagree. We find that the largest companies of large cap indexes are routinely penalized. In addition, we find that even large companies can enjoy a size premium if they are small compared to their index.

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<sup>4</sup> Fama, Eugene F. and French, Kenneth R., "The Cross-Section of Expected Stock Returns," *Journal of Finance* 47, 427-465 (1992).

<sup>5</sup> Cap-weighting inherently is a momentum strategy. Cap weighting rewards stocks with recent outperformance with a larger weight in the portfolio.

<sup>6</sup> The market rose in 1999 with a falling advance-decline line, suggesting large cap stocks were leading the rally and smaller stocks were not participating.

<sup>7</sup> Fama, Eugene F. and French, Kenneth R., *Migration* (February 2007). CRSP Working Paper No. 614; Available at: [ssrn.com/abstract=926556](https://ssrn.com/abstract=926556)

## The Largest Company Penalty

John Serrapere, who introduced the first S&P 500 equal-weight index (SPXEW) and exchange-traded fund (RSP) while working for Rydex in 2003, found that SPXEW beat the S&P 500 on a calendar year basis 26 times in 42 years from 1958 through 2002. During that 45-year period, SPXEW beat the S&P 500 by 2.7% annually on a compounded basis.

Serrapere wrote that SPXEW rarely underperformed the S&P cap-weighted index in back to back years, and only then as a result of "momentum driven markets" such as the late 1990s.<sup>7</sup> Serrapere's research hints that the largest companies in the S&P 500 have been penalized since 1958.

More directly, Rob Arnott examined the domestic large/midcap universe from 1952-2009 and concluded the largest stock in any sector underperformed the average stock in its sector by 3.3% per year over the next decade.<sup>8</sup>

	<b>1 Year</b>	<b>5 Years</b>	<b>10 Years</b>
<b>Nondurables</b>	0.4%	-1.6%	-2.8%
<b>Durables</b>	-3.5%	-5.2%	-4.5%
<b>Manufacturing</b>	1.3%	0.5%	0.1%
<b>Energy</b>	-1.1%	0.5%	0.8%
<b>Chemicals</b>	-3.1%	-1.8%	-2.0%
<b>Business Equipment</b>	-4.4%	-4.0%	-4.2%
<b>Telecommunication</b>	-7.4%	-5.7%	-6.1%
<b>Utilities</b>	-3.3%	-4.9%	-2.7%
<b>Shops</b>	-0.8%	-2.0%	-1.8%
<b>HealthCare</b>	-4.9%	-4.3%	-2.4%
<b>Finance</b>	-2.3%	-6.7%	-6.6%
<b>Other</b>	-12.5%	-11.6%	-7.0%
<b>Average, All Sectors</b>	-3.5%	-3.9%	-3.3%

Arnott's findings are compelling evidence that "largest" simply means "overvalued."

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<sup>7</sup> Serrapere, John, "All Things Being Equal," *Journal of Indexes* (August 2004); Available at: [etf.com/publications/journalofindexes/joi-articles/1805.html](http://etf.com/publications/journalofindexes/joi-articles/1805.html)

<sup>8</sup> Arnott, Rob, "Too Big to Succeed," *Financial Index Newsletter* (June 2010); Available at: [researchaffiliates.com/documents/F\\_2010\\_June\\_Too\\_Big\\_to\\_Succeed.pdf](http://researchaffiliates.com/documents/F_2010_June_Too_Big_to_Succeed.pdf)

## The Smaller Large Company Premium

Fama and French define small companies as those with market capitalization below the median on the New York Stock Exchange. By that definition, all or nearly all of the S&P 500, Russell 1000 and Dow Jones Industrials Index ("Dow" or "DJIA") companies are "large."

We studied the large cap S&P 500 and Russell 1000 indices.<sup>9</sup> We tested 52-week holding periods beginning at four different start dates spread throughout 2000.

Through December 9, 2016, we found in each case that an equal-weighted portfolio of the top 20% of each index ranked by market cap materially underperformed an equal-weighted portfolio of the entire corresponding index on a compounded annualized basis. This confirms the "largest company penalty" observed by Serrapere and Arnott.

Additionally, we found an equal-weighted portfolio of the bottom 50% of each index ranked by market cap materially outperformed an equal-weighted portfolio of the entire index.

**Table 2. Relative Performance of Equally-Weighted Largest Quintile & Smallest Half vs. Average Stock in Index (2000-2016)**

	Largest Quintile	Smallest Half
<b>S&amp;P 500</b>	-4.7%	2.4%
<b>Russell 1000</b>	-3.8%	1.5%

Our findings conclusively show that, in the indices noted above, "smaller large companies" have outperformed since 2000 while the largest companies have underperformed over the period.

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<sup>9</sup> For all original testing cited in this article, we used our point-in-time database free from look ahead, survivorship and other biases.

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## The Curious Case of the Dow Blue Chips

Michael Aked, *et al.* writing for Research Affiliates compared cap-weighted indexes to equal-weighted indexes from 1985-2013 and concluded: "The net performance of equal-weight strategies suffers as the . . . [company size] grows . . . eventually falling behind that of cap-weighted strategies."<sup>10</sup>

We know of no larger company size universe than the thirty blue chip stocks comprising the DJIA. Our research shows a dramatic change in the Dow beginning in 2000.

Prior to 2000, we found no "largest company penalty" or a "smaller large company premium" in the Dow, confirming the research of Aked, *et al.* Indeed, from January 1, 1980 through December 31, 1999, the top 20% of the Dow ranked by market cap materially outperformed an equal-weighted portfolio of the entire Dow on an annualized basis. The bottom 50% of the Dow ranked by market cap materially underperformed an equal-weighted portfolio of the entire Dow on an annualized basis.

Since 2000, however, we find evidence of both the "smaller large company premium" and the "largest company penalty." Here are the total returns from January 1, 2000 through December 9, 2016 in each year's top DJIA market cap stocks individually (as a portfolio of one), and as an equal-weighted group of six, each rebalanced every 52 weeks:

<b>Market Cap Rank</b>	<b>Annual Return</b>
<b>Largest DJIA Stock</b>	-4.0%
<b>Second Largest</b>	-0.3%
<b>Third Largest</b>	3.6%
<b>Fourth Largest</b>	1.0%
<b>Fifth Largest</b>	-2.1%
<b>Sixth Largest</b>	-4.7%
<b>Largest Six Equal-Weighted</b>	0.5%

Comparatively, the average Dow stock returned 6.2% annually assuming a 52-week rebalance. Each of the top six largest stocks underperformed the average DJIA stock both individually and as an equal-weighted group. This is evidence of the "largest company penalty" at work.

Likewise, the smallest 50% of the Dow, equally weighted and rebalanced every 52-weeks, returned 9.0% for the period. This is evidence of the "smaller large company premium" in action.

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<sup>10</sup> Aked, Michael; Kalesnik, Vitali; Kose, Engin; Lawton, Philip and Moroz, Max, "Equal-Weight and Fundamental-Weight Index Investing: A Comparison of Two Smart Beta Strategies," Research Affiliates (May 2014); Available at: [researchaffiliates.com/documents/Equal\\_Weight\\_and\\_Fundamental\\_Weight\\_Index\\_Investing\\_PDF.pdf](https://researchaffiliates.com/documents/Equal_Weight_and_Fundamental_Weight_Index_Investing_PDF.pdf)

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## Raising the Question: Why?

So what happened in the Dow *circa* 2000? We believe the rise of the cap-weighted passive index funds (including cap-weighted sector SPDRs introduced in late 1998) has doomed the largest stocks in the Dow to mediocrity in most market environments.<sup>11</sup> Currently, over 12 cents on every dollar flowing into S&P 500 cap-weighted index funds go to purchase the largest six stocks of the Dow. Moreover, each of these stocks individually claims roughly 12 cents of every dollar flowing into their respective cap-weighted sector funds.

As the stock market turns into a weighing machine over the long run, virtually no company can sustain the type of business success necessary to justify these levels of inflows -- month after month, year after year.

On the other hand, less than 8 cents on every dollar flowing into S&P 500 cap-weighted funds go to purchase the smallest half of the Dow. This is much more manageable. In fact, if any of these smaller Dow stocks show improvement in their business fundamentals relative to their stock price, the passive index fund inflows provide explosive kindling for the stock prices of these companies to catch fire.

## Lessons for the Blue Chip Investor

Pursuant to our research, here are the key takeaways for the long-term blue chip investor:

1. Avoid the largest companies in the blue chip indexes, particularly the Dow;
2. Focus on the smaller companies in the Dow and other blue chip indexes.

Additionally, equal weighting with periodic rebalancing to trim gainers and add to laggards is an excellent way to invest in blue chip stocks. Under current laws, one-year periods make a lot of sense in taxable accounts, and do not negatively impact the “smaller large company” premium in our findings.

Finally, adhere to solid fundamentals of portfolio construction. Limit exposure to any one sector at 20-30%. Limit exposure to any one stock at an acceptable risk level. For most, this means that a Dow blue chip strategy will not comprise the entire portfolio, but rather just part of it.

At Kerns Capital Management, we specialize in stock selection strategies intended to produce better risk-adjusted returns than buy and hold passive funds which track cap-weighted indexes.

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<sup>11</sup> Market environments where the largest Dow stocks might flourish include: a rush to safety in a bear market, momentum-driven markets, and markets where the cost of capital is extremely high.