

Is Fossil-Free Investing a Serious Risk to College Endowment Return?

Preamble

Pomona College is a private university with a \$2 billion dollar endowment, located in Claremont, California, serving approximately 1600 undergraduates. In April 2014, Pomona College's Investment Committee requested that its financial advisor, Cambridge Associates, analyze the potential impact of fossil fuel divestment on its portfolio. The request was responsive to both the student-led fossil fuel divestment campaign at Pomona College, and also to a resolution passed by the Pomona Committee on Social Responsibility (CSR) recommending divestment. Economist Jay Prag reviewed the Cambridge Associates analysis of the impacts of fossil fuel divestment and offers his critique.

About the author

Professor Jay Prag has a PhD in Economics from the University of Rochester. He has been teaching at the Claremont Colleges since 1986. He is currently a Clinical Associate Professor of Economics and Finance at the Peter F. Drucker School of Management. He is the former Academic Director of the Executive Management Program and of the Financial Engineering Program.

For many years he was the Corporate Trainer in finance for Southern California Edison. He has served on several Boards of Directors including a current position with LINC Housing, a multimillion dollar developer of low-income housing. Prior to that he chaired the Investment Committee for Mount San Antonio Gardens Retirement Community where he helped manage an \$80 million portfolio.

Is Fossil-Free Investing a Serious Risk to College Endowment Return?

To jump right to the punchline, no, there is no way to accurately claim that a fossil-fuel free investment strategy underperforms other diversified, market-based strategies.

In analyzing the potential loss in returns that college endowments face by avoiding fossil fuel companies, most analysts make unsupportable jumps from past returns to future returns. Every official communicate from a financial advisor stresses that past returns are not a good prediction of future performance and that is most certainly true when one does careful analysis of fossil free investing.

In 2013, Cambridge Associates, the investment advisor for Pomona College, wrote a report in which they attempted to analyze the impact of fossil fuel divestment (henceforth known as the Pomona Report). The report responded to a Pomona College Investment Committee resolution calling for the divestment of endowment funds from fossil fuel holdings within five years.

As the report said, there are several issues involved in analyzing fossil-free investing; some theoretical and some practical. First is the question of divestment impact on an otherwise large, well-diversified portfolio. Portfolio theory asserts that risk and return should be analyzed after the investor has diversified away company-specific risk. The most frequently used risk measure, beta, assumes that every stock is part of a large diversified portfolio. If a portfolio of 5000 stocks (the Wilshire 5000) actively excludes several hundred stocks, the portfolio is still quite large and there's no reason to think that the basic tenets of Portfolio Theory would not hold.

So in analyzing divestment, the only real question is whether the pool of stocks that are removed is important to the return of the rest of the portfolio. Using betas from the Stern School¹, one sees that the largest group of oil and gas companies, production and exploration, has an unlevered beta (stock beta corrected for the debt equity

position of the companies) of 0.5. The average beta of all of the oil and gas industries is also less than one. So these are not companies whose returns are expected to be high compared to the rest of the market.

It is tempting to suggest that omitting an industry group might somehow destroy the effects of diversification for the remaining portfolio. Statements are frequently made that “you need the oil and gas sector to balance the risk of some other sector.” But that is not how Portfolio Theory works. Portfolio Theory says that as the portfolio gets large (strictly speaking, approaches infinity), the risk of the portfolio converges to the average covariance of the stocks in the portfolio. The most important factor in this analysis is the size of the portfolio.

Omitting a pool of low beta stocks is not likely to have a big impact on the risk or return of the remaining portfolio as long as the remaining portfolio is large and otherwise diversified.

Stepping outside of Portfolio Theory, we can also assert that these companies will be taxed and regulated more heavily than other companies going forward, so future earnings and returns will almost certainly be lower than past results.

The second contention that is frequently made, and the focus of a large part of the Cambridge Pomona Report, is that active fund managers will not be willing to exclude a sector such as fossil fuels for one client because the managers need to outperform the market indices in order to justify their management fees. This logic assumes that active managers do regularly beat market indices and the research there is clear – they do not.

A recent study by Standard and Poors confirmed many other previous studies, and the Wall Street Journal's Dartboard series: active managers underperform the market about 75% of the time. And even when an active manager beats the market on an annual basis, there is no good evidence to show that they can do so repeatedly.

Most active fund managers can find time periods or averaging techniques that make them look successful. But usually there is a flaw in that analysis. Choosing a start and end year during which the actively managed fund outperformed an index or choosing one of many possible indices that the fund was able to outperform are two common strategies.

Another is the averaging problem. Consider two investment strategies over a 5 yr. period. The first investment strategy had an annual return of 4% every year. Its average annual return is 4% no matter how you calculate it. If you invest \$100 at 4% for five years, you end up with \$121.67.

The second asset paid annual returns of: -5%, 13%, -2%, 10% and 4%. Averaging the annual returns (adding them up and dividing by five) gives you an apparent average return of 4% but if you invest \$100 at those returns for those years, you will end up with \$120.35 which corresponds to an actual average annual return of 3.77%. The problem is that of arithmetic averaging versus compounding the returns and using the fifth root to determine the correct average annual return.

Active managers would happily report the inaccurate arithmetic average (4%) when, in fact, the choices they are making to occasionally achieve a higher return almost certainly lead to an equal number of lower annual returns. The start-and-end year problem is obvious here as well. If I analyzed the second portfolio in years 2 through 4, (13%, -2% and 10%) the more volatile strategy will look better. The Pomona Report cites higher returns for their actively managed assets than the corresponding years' market returns. Not knowing how selective they were in presenting their data, one can only revert to broad, published studies that show actively managed funds do not outperform the market.

The logic of pragmatic market efficiency is at work here. Everyone who is investing in individual stocks is trying to find "winners." That the relatively small number of people who actively manage portfolios are somehow better at doing this assumes they have skills or sets of knowledge no one else in the investing community possess. If they did, why would they be portfolio managers? Why wouldn't they invest for themselves and simply get rich? Active portfolio management, when it is successful, is more likely to be luck associated with timing than anything else.

The remaining issue, the practical issue, is where can fossil-free investors invest? Clearly many cheap and easy investments such as market-indexed ETF's are not acceptable since they are not fossil-free (although a synthetic ETF that matches a market index using derivatives but no direct stock investments could be considered acceptable).

If college endowments representing potentially billions of investment dollars wanted a fossil-free but otherwise market portfolio, they could certainly get an investment house to form it (indeed, these already exist). It then becomes an exercise in rebalancing and maintenance to make sure the annual returns are close to those that others achieve in traditional market indexed portfolios.

The bottom line is, again, that there is no way to accurately claim that a fossil-fuel free investment strategy underperforms other diversified, market-based strategies.

1 Damodaran, "Betas By Sector", January 2014. Available at: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html (last accessed April 12, 2014).