

# Inviting the Elephant into the Finance Classroom

Susan Jacobson, Regis University

## ABSTRACT

*The elephant in every room, especially every classroom, is climate change. This paper suggests one way to bring climate change into the business finance classroom in the context of engaging students in real world problems, while practicing basic financial analysis and written communication in the form of business memos.*

## INTRODUCTION

It is no longer possible to ignore the issue of climate change regardless of discipline. Despite the politics, the science is clear. The planet is warming. So how do we bring this pressing issue, which our students will face much more concretely than we will, into our classrooms? This paper suggests how to do this in finance classes in a way that reinforces finance content and applies it to a real world issue that cannot be ignored.

The divestment movement, led by Bill McKibben's 350.org is gathering steam on campuses across the world. Thirty three colleges/universities have committed to divestment along with 44 cities, 82 churches, and 34 foundations ("Commitments," [gofossilfree.org](http://gofossilfree.org)). In addition, in September 2014 the Rockefeller Brothers Fund announced that they would begin a two-stage divestment plan ("Divestment Statement," [rbf.org](http://rbf.org)). The argument to sell the stocks of fossil fuel companies is simple: divestment puts pressure on fossil fuel companies to leave fossil fuels in the ground and instead invest in clean energy to help reduce additional release of carbon into the atmosphere.

Some of the arguments, though not all, against divestment are financial. Critics of the movement contend that it is too complicated to divest and that returns will suffer, threatening the organization's ability to accomplish its primary mission, which in the case of a university is education not political activism. These are issues that students who have completed even one finance class should be able to address.

To make sure that all the students in my business finance classes have a basic understanding of climate change, a professor in Peace and Justice who focuses on climate change comes to my finance class to talk about the science and ethics of carbon dioxide in the atmosphere. (I also guest lecture in his class to help his students understand the financial implications of divestment.) Then to get students to begin thinking specifically about the issue of divestment they read a packet of readings that presents both the pros and the cons of divesting. They also explore 350.org's [fossilfree.org](http://fossilfree.org) website. Then they complete two assignments that involve role playing.

Their first assignment, the second in a series of assignments on ethical issues in investing, is to respond to a memo from the university's president, (actually written by me), asking for a summary of the arguments for and against divestment. This ensures that the students understand the arguments for and against divesting before digging deeper into the financial issues. In the

second memo, again in response to a memo from the President (which I also write) they make a recommendation to the President, laying out the case either for or against divestment. This second memo must include financial data. The students analyze historical risk and return of a portfolio of fossil fuel stocks compared to a portfolio of non-fossil fuel stocks. They also research whether or not there is a feasible alternative to investing without owning fossil fuel companies to address the question of how difficult it would be for the University to divest from fossil fuel companies.

These exercises accomplish a number of goals. Students learn to deal with real world issues and data. They learn how to use simplistic measures for risk and return for portfolios of stocks. They also learn about mutual funds and how to find a fund that matches specific investment objectives. Finally, they learn to write memos and to give clear advice, rather than waffling, on an issue that has two sides with credible arguments on both sides.

## **THE FINANCIAL ARGUMENTS AGAINST DIVESTMENT**

The two prominent arguments against divestment are that it will compromise investment performance (lower returns and/or increase risk) and that it's too complicated to execute. It's difficult to convince investors that it's a good idea to sacrifice returns for ideals. Even at Regis, a Jesuit Catholic institution with a very strong mission that's highly visible in all our work, less than 3% of retirement assets are invested in socially responsible fund choices. So when financial analysts like Mark Kritzman of Windham Capital Management and Tim Adler, a financial journalist, reported that by using simulation analysis they could argue that millions of dollars could be lost if investors divested from fossil fuels (Kritzman, Mark., "What Fossil-Fuel Divestment Would Cost," Chronicle.com), it got people's attention, especially fiduciaries whose role is assumed to be to maximize returns given a decided-upon level of risk. And when they tried to get the attention of educators by translating the lost dollars into 5,000 years of lost college education, it seemed a significant sacrifice. In addition, others have argued that eliminating a significant percentage of the available investment assets could not only lower returns but obviously increase volatility by reducing diversification (Rosenberg, Brian. "For College Endowments, Ethical Stands can be Complicated," Chronicle.com). If returns fall and risk increases, divestment is clearly not a wise choice on financial grounds alone. This creates the need to justify divestment with extremely persuasive ethical reasons to offset the financial loss. It's not that it can't be done. Universities do not invest in illegal businesses like prostitution or narcotics regardless of the returns. The reasons are clearly compelling in those cases. But persistent doubt about the threat of climate change regardless of almost unanimous agreement among scientists, makes the moral argument for divesting from fossil fuels more difficult.

The other argument that people use to discourage divestment is that it is just too complicated. Those who use this argument say that it is impossible to know all of the assets that each of the mutual fund holdings in their portfolios are invested in at any one time. This is an accurate statement. Mutual funds are required to report their holdings only twice a year, so investors do not know what stocks they are invested in at any particular time. And if most organizations are like Regis, they own a large number of funds (way beyond what is necessary for diversification). So is it practically possible to divest without hours of analysis and/or hiring an expensive manager to hand pick a fossil-free portfolio?

## **HELPING STUDENTS PROBE THE FINANCIAL ARGUMENTS AGAINST DIVESTMENT**

As a prelude to thinking about divestment, students think and write about the notion of socially responsible investing. Their first memo assignment (copied in Appendix 1) requires the students to read about socially responsible investing as a concept and consider whether or not Regis should think more carefully about where its endowment is invested in light of the opportunities to be a socially responsible investor. This introduces the students to the notion that investment decisions might be constrained by factors unrelated strictly to risk and return. It also asks students to use information from both a scholarly paper and a reading on the various ways one can support an ethical decision.

Then the students jump into the idea of divestment. But before they can assess the financial arguments against divestment, they must gain familiarity with the issue. They do this by reading a packet of readings, listed in Appendix 2. Using this material they role play as the expert writing a memo to Regis' President that summarizes the pros and cons of divestment without arguing for or against it. This assignment is copied in Appendix 3. This memo again challenges students to summarize complex arguments in their own words, simplify details and focus on what's critical to become informed about an issue.

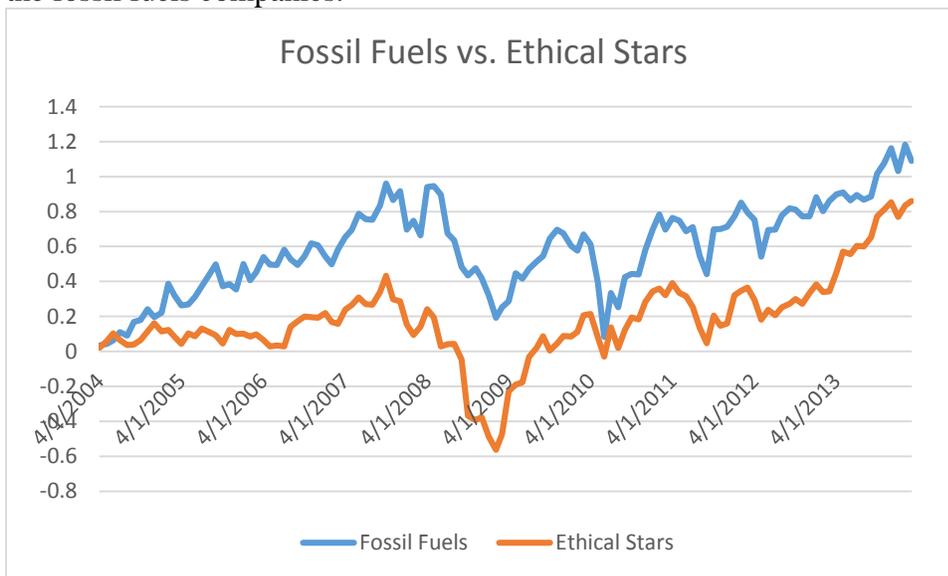
The third memo assignment asks the students to specifically consider the risk and return implications of divesting from fossil fuels. This assignment is copied in Appendix 4. As you can see from the assignment, this is a simplified case study. Many, if not most, of the students in the business finance classes at Regis are not majoring in finance and struggle with multi-stage processes. Nevertheless, this assignment challenges the students to think about these basic financial issues in the context of a contentious real-world issue and meet these learning objectives:

- Use Excel to calculate risk and return for a real portfolio of stocks.
- Determine what is an acceptable return and level of risk, i.e., what is an appropriate benchmark or comparison for a portfolio of stocks?
- Think about and decide on an appropriate period of time for calculating risk and return?
- Observe the risk of a portfolio of stocks compared to a single stock.
- Consider how much historical returns tell you about future performance?

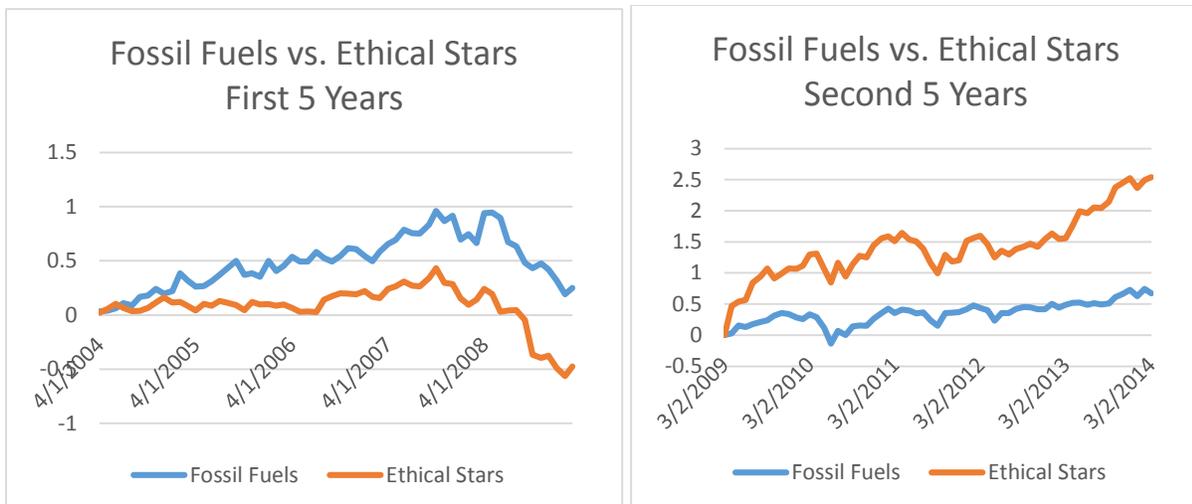
Before students take on this assignment, they have practiced downloading stock price data and calculating risk and return measures for both single stocks and portfolios of stocks in Excel during class more than once. But for this assignment I downloaded and sorted the stock price data for them to reduce the hours they would have to spend on this assignment. Doing this obviously required that I choose the portfolios of stocks for the students to compare. In addition these are small portfolios meant simply to demonstrate the way in which more careful research might be done. In a more advanced class, the students would identify the appropriate stocks to put into the portfolios and download the price data themselves to test the impact of divestment. The two portfolios of stocks were chosen without any prior knowledge of the performance history of any of the stocks. I chose five companies from the top 10 fossil fuel companies at <http://gofossilfree.org/companies/> and five companies chosen from Ethisphere's list of the world's most ethical companies at <http://ethisphere.com/worlds-most-ethical/wme-honorees/>. These companies were matched approximately by market capitalization because we know that market capitalization can be an important determinant of returns on stocks. The five fossil fuel companies were Exxon, BP, Total, Conoco Phillips, and Chevron. The five ethical companies

were Microsoft, PepsiCo, ING, Intel and GE. The students had 121 months of stock prices, from 3/1/2004 through 3/1/2014, so that they could calculate monthly returns for both five and ten-year periods. (The data period reflects that I did not teach this class in the 2014-2015 academic year because I was on sabbatical.) Again, let me emphasize that these are not the “perfect” portfolios for students to compare. This exercise was intended to be as much about process as anything. But interestingly (and I was open to whatever the results might be) these two portfolios yielded results that dramatically illustrated the issues I wanted the students to think about.

The chart below illustrates the cumulative returns for the two portfolios for the 10 years of monthly data from March 2004 through March 2009. The average monthly return for the Fossil Fuels companies was .82% while the average return for the Ethical Stars was .85%. The standard deviation of monthly returns for the Fossil Fuel portfolio was 6.39%, while the standard deviation for monthly returns for the Ethical Stars was 8.23%. For these 10 years, Fossil Fuels win – they have a higher cumulative return and considerably lower risk for about the same average return. These results are clearly influenced by the housing crisis. When the markets collapsed, not surprisingly, the consumer-oriented stocks suffered a much greater downturn than the fossil fuels companies.

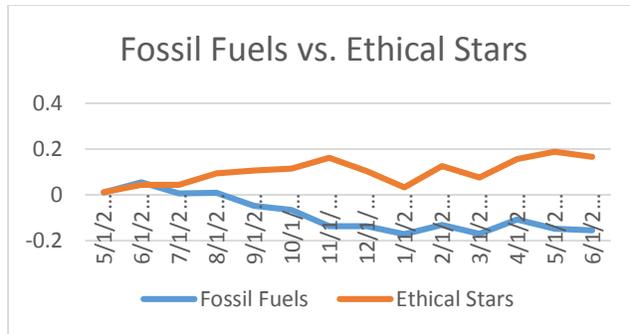


However, if we break the data into two five year periods the results are interestingly different. These two graphs of cumulative returns tell the story. In the first five years of the data period, fossil fuel companies did much better. But in the more recent five year period, the Ethical Stars are the clear return winners. If we look at average monthly returns, the Fossil Fuels portfolio earned 1.11% while the ethical winners earned an average 2.46%. The Ethical Stars monthly returns were more volatile with an 8.67% standard deviation for monthly returns versus 7.1% for the Fossil Fuels portfolio.



Now the story changes. The consumer-oriented Ethical Stars rebounded out of the dip with much stronger performance. Again this is expected for anyone who watches markets (not the majority of students in these classes). The hope was that this flip flop in return performance might force the students to ask how relevant which data are to their analysis. Will the next five years be more like the first five in their data series or more like the more recent five? Is there really any way to know? How many people predicted the housing crisis? Would we be able to predict the next crisis? The Ethical Stars' stock returns are more volatile, but is this increase in volatility significant? (In this first class, we do not have time to discuss how to use risk-adjusted returns, and though it would have been good to ask the students to calculate a weighted average beta for each portfolio, I did not. Looking back and using data from 6/2015, both portfolios have average betas of 1. But the Ethical Stars has a greater variety of betas ranging from .73 for Microsoft to 1.56 for GE. All the companies in the Fossil Fuels portfolio have betas approximately equal to one, ranging from .89 for Conoco Philips and Chevron to 1.11 for Exxon Mobile.) But what I hoped students would remember from the class is that it is impossible to predict the market or the performance of any individual stock. If they had, then they should have begun to think about whether or not return analysis is even relevant to the question. Is this a finance question or an ethical question? If there is any truth in the efficient market theory, this is an ethical question. We cannot predict stock prices, so if we are going to pursue any kind of an active management strategy, it should be based on something other than historical return analysis.

As you might expect, the most recent five years was far more predictive of returns going forward. Between the end of the data set the students used in spring 2014 and June 2015 the cumulative total return performance of the two portfolios were almost mirror images. The average monthly return for the Fossil Fuels portfolio was -1.1% compared to +1.2% for the Ethical Stars. The volatility of monthly returns was still a bit higher for the Ethical Stars – 4.5% versus 4.4%.



The second reason for not divesting, it's just too complicated, can be easily refuted. It's true that there is no way any mutual fund investor knows at each point in time what stocks she is invested in. But this does not preclude an organization from divesting. The momentum of the movement has resulted in a number of broadly diversified mutual funds that have committed to divestment to meet the demand for fossil-free portfolios. Green Century Capital Management and Trillium Asset Management are just two examples of companies that provide fossil-free investment options. Other possibilities include Parnassus Endeavor Fund, Pax World Growth Fund, Portfolio 21, and Shelton Green Alpha Fund ("Go Fossil-Free," [greenamerica.org](http://greenamerica.org)). In this particular assignment I did not ask the students to advise how divestment might be operationalized, but in a more advanced class, students would be asked to research that piece of the puzzle also.

## STUDENT ADVICE

At Regis the classes are small, so the sample of memos numbers only 38. Of these 38, 35 students advocated for divestment, though one person said it should be a slow process. This is not surprising as my choice of this assignment tips my hand toward divestment. More interesting is the way the students supported this advice. First let's discuss how they used the data and then move to the ethical arguments the students used.

Nine students picked up on the unpredictability of future returns arguing that essentially this was an ethical issue since no one can predict what will happen to stock prices. Here's one quote that reflects that analysis: "Stock price data can only tell you so much in terms of past performance and is ultimately not reliable to make predictions about future returns." And here's a second one: "...because no one is absolutely positive what will happen in the market with stock's return."

Thirteen students argued that the analysis should focus on the last five years rather than the longer data period. Here is how one student argued that case: "...one inference that can be made from the five year analysis of fossil fuels are that their stocks are losing momentum. As climate change becomes more prevalent and cleaner energy sources gain popularity, the choice of divestment will not only be the right thing to do, but the smart thing to do."

Two students who focused on Regis's investment policy noted that both portfolios met the 5% target return and so argued the focus should be on making the ethical choice to divest.

Unfortunately, even though we had practiced these calculations in a computer classroom, 10 of the 38 students, though they attempted to analyze the data, were unable to produce coherent numbers. Another four simply ignored the data all together. This means that more than one third of the students were unable or unwilling to do simple return calculations to use in their memos.

The ethical arguments to support divestment also varied in kind and power. These arguments came from “A Framework for Thinking Ethically posted on Santa Clara University’s website (<http://www.scu.edu/ethics/practicing/decision/framework.html>). Nine students chose to support their advice to divest on the basis of utilitarian ethics. Here’s an example of that rationale:

“Knowing that Regis is contributing to a better future for the earth and its inhabitants should be sufficient incentive. Regis’ mission also coincides with the ethical perspective of the utilitarian approach meaning that they strive for making decisions that ‘produce the greatest good and does the least harm for all who are affected.’ “

Six students argued that Regis’ reputation based on its mission was at stake. Here’s how one student used that rationale: “Regis prides itself to be in the service of others. Greening our endowment portfolio takes a step further to preserve that service and still maintain our mission.” Here’s a slightly different and cogent take on a similar argument: “Regis should take a stand against the fossil fuel industry and support students in this movement because after all the whole purpose of the university’s mission statement is to provide a future for students.”

Five students explicitly cited the common good approach to support divestment. Here’s an example from a student who was unable to produce any data analysis, but understood how the common good is related to fossil fuel companies.

“In Santa Clara University’s *A Framework for Thinking Ethically* they explain the Common Good Approach to thinking ethically is, “the notion that life in community is a good in itself and our actions should contribute to that life.” This meaning everything is connected, and we need to respect our relationships for the welfare of our world. Our lives are directly connected to the health of the earth, and if we do not respect our relationship with the earth we too will fall in its demise.”

Virtue ethics, the idea of who will I become if I behave this way, found its way into the rationale of three students. Here’s an example:

“Using the Greek philosopher’s virtue ethics approach you must ask yourself, ‘Which option leads me to act as the sort of person I want to be?’ (A Framework for Thinking Ethically) or in this case what option leads me to act in the best interest of how I want Regis University to be perceived.”

Here’s another student’s use of sing virtue ethics:

“By divesting from these companies that are damaging the environment, we are acting as a virtuous institution, in the sense that we are acting a way, ‘that makes [the] possessor good’.”

The other 12 students who argued for divestment used very general arguments about behaving morally or ethically without using the specific standards of ethical decision making from the reading. This is understandable given the written assignment did not specifically ask them to cite the ethical decision making reading, even though we discussed in class with each memo the importance of framing and supporting any decision. Here’s an example of one of those very general statements:

“Divesting is certainly a courageous act, as it will raise much thought about how portfolio returns will be affected, however, having the integrity and courage to do so speak true about our university’s character when it comes to investing and upholding its values and mission.”

The three students who argued that Regis should not divest, and the one who argued that Regis should move slowly, focused primarily on risk. Here's an example of a rationale based on risk:

“Since our educational institution has a responsibility to constantly be facilitating this education, our portfolio needs to be reliable. Suffering major losses due to a portfolio's substantial standard deviation cannot occur when educating the youth is a priority.”

As an aside, one student went on a tangent about Elliot Wave Theory that had no bearing to the issue.

## **ASSESSING THE ASSIGNMENT**

This assignment produces radically diverse products. Despite its simplicity – it's really just a caricature of the issue – only about one fourth of the students are able to deal with both the financial analysis and the ethical issue at a substantive level and to provide clear, well-supported advice for someone thinking about divesting. Some of these students who succeed get to this point after submitting a draft and coming to office hours to discuss the problems they are having. A few figure it out on their own from class discussion and practice. The next half are able to produce something coherent on at least one of the two dimensions. But at least one quarter of the students are not able and/or willing to write much of value on the issue. This is a challenge for a professor. Do I continue to assign challenging and novel assignments hoping to perhaps restructure them or provide the students more support for tackling them or do I defer to the problems at the end of the chapter? For me the answer is easy. In order to stay engaged in my work in the classroom, I have to attempt to engage the students in the real world issues that I care about.

## **CONCLUDING REMARKS**

In most finance classes it's all about the numbers. Even though we teach efficient market theory, we also dabble in stock valuation and active investment strategies. But if one accepts the scientific consensus that climate change is real and caused by humans, the ethical arguments for divestment are far more compelling than the story of hope over experience that any of us is the next Warren Buffet (though his recent returns also prove his fallibility). More importantly we must begin to identify what the real issues are. As Pope Francis' tells us in his latest encyclical on climate change, it's time for a change in the way we think about our world so that we can see beyond the standard economist's world where we are all maximizing our individual utility.

“By learning to see and appreciate beauty, we learn to reject self-interested pragmatism. If someone has not learned to stop and admire something beautiful, we should not be surprised if he or she treats everything as an object to be used and abused without scruple. If we want to bring about deep change, we need to realize that certain mindsets really do influence our behaviour. Our efforts at education will be inadequate and ineffectual unless we strive to promote a new way of thinking about human beings, life, society and our relationship with nature. Otherwise, the paradigm of consumerism will continue to advance, with the help of the media and the highly effective workings of the market” (Francis, Pope, “On Care for our Common Home,” para. 215).

What's not said in this quote, is that despite the market being effective in some cases, unpriced externalities shift costs to the uninvolved parties and those least able to bear them. How

can we justify not taking action in our classrooms that might help lower these costs of climate change? And how can we abdicate responsibility for the destruction of hundreds of species of life? At a Jesuit University, given Pope Francis' latest encyclical calling for an awakening of consciousness there is no excuse not to invite the elephant of climate change into our classrooms.

“But a sober look at our world shows that the degree of human intervention, often in the service of business interests and consumerism, is actually making our earth less rich and beautiful, ever more limited and grey, even as technological advances and consumer goods continue to abound limitlessly. We seem to think that we can substitute an irreplaceable and irretrievable beauty with something which we have created ourselves” (Francis, Pope, “On Care for our Common Home,” para. 34).

These issues are critical for students in every discipline. Climate change cannot be ignored. Only by taking an interdisciplinary approach to the problem, will there be any solution that is bold enough to make a difference.

## Appendix 1

Business Finance – Jacobson  
Spring 2014

Memo #1 Assignment

**Optional Draft DUE:** February 6, before 9 AM

**Final Memo DUE:** February 18, before 9 AM

Please refer to this website for the basics of memo writing. Read all the sections – Audience, Parts, Format, and Sample under this URL: <http://owl.english.purdue.edu/owl/resource/590/1/>

Turn in optional drafts and final memos at turnitin.com. Here's what you need to use the site.

Class ID = 7524854

Password = ba430jacs14

Late papers will not be accepted unless you have an unpredictable emergency you can document. Please go to the turnitin site well before your assignment is due so that you will not have to deal with last minute snafus.

### **YOUR ASSIGNMENT**

This assignment asks you to think about a very practical dilemma that faces all investors. Should investors just invest in whatever assets will earn the highest expected return or should they constrain investment choices to reflect moral reasoning and ethical issues? In order to become acquainted with the way investors think about constraining investment choices, read the paper “Socially Responsible Investing: An Investor Perspective” by Berry and Junkus. This reading is posted at D2L. Then read the “Regis Investment Policy” also posted at D2L. Finally, read “A Framework for Thinking Ethically” that is also posted at D2L.

Now put these all together to advise the Regis Investment Committee about whether they should begin to think more seriously about their investment criteria. This memo should be addressed to the Investment Committee and should contain clear advice for the committee members. Should they or should they not restrict their investment choices? This clear advice should reflect your knowledge of the articles you have read – knowledge of SRI, knowledge of how to think about making an ethical decision, and knowledge of Regis' investment policy. Make sure you have supported your recommendation with one of the rationales for making an ethical decision presented in “A Framework for Thinking Ethically.”

Don't forget to cite your sources both within text and on a works cited page. If you use words from your readings they need to be inside quotation marks and cited in the text and at the end of the memo. If you paraphrase, but use ideas from your readings, the source needs to be cited in the text and at the end of the memo.

If you need help citing sources, here's a good resource.

<http://owl.english.purdue.edu/owl/resource/560/01/>

You can also use the article “Socially Responsible Investing: An Investor Perspective” as a guide to citing sources appropriately.

## Appendix 2

BA 430 – Jacobson

Reading for Fossil Fuel Divestment Assignments

Go to this website to get some basic information about the issue before reading the following articles.

<http://gofossilfree.org/>

<http://chronicle.com/article/What-Fossil-Fuel-Divestment/137941/?cid=at>

<http://chronicle.com/article/For-College-Endowments/137939/>

<http://chronicle.com/blogs/letters/climate-change-requires-an-exception-to-no-divestment-policies/>

[http://www.washingtonpost.com/business/economy/on-campus-a-fossil-fuel-divestment-movement/2013/11/25/45a545e6-52fc-11e3-a7f0-b790929232e1\\_story.html](http://www.washingtonpost.com/business/economy/on-campus-a-fossil-fuel-divestment-movement/2013/11/25/45a545e6-52fc-11e3-a7f0-b790929232e1_story.html)

<http://chronicle.com/blogs/bottomline/divesting-in-fossil-fuels-shouldnt-harm-endowments-report-finds/>

<http://thepolitic.org/eye-of-the-storm-morality-and-practicality-in-yales-fossil-fuel-divestment-movement/>

### Appendix 3

To: Regis College Finance Students  
From: Father Fitzgibbons (acted by S. Jacobson)  
Date: February 24, 2014  
Re: Socially Responsible Investing and the Fossil Free Campaign

You are to be commended for your solid advice to the Regis Investment Committee to carefully consider whether the University should strengthen its commitment to socially responsible investing. I was especially impressed with the way you supported your recommendations with ethical decision making principles. We will discuss your advice at our next meeting.

Thinking about socially responsible investing and discussing it with some of my colleagues at other Jesuit Universities, I have also heard about a movement to divest from companies in the fossil fuel industry. I understand that some Jesuit schools have taken a stand on this issue. As you know my schedule is hectic. Also, my academic background is English, so I am not nearly as savvy about finance as you are. That's why I am asking you to write a memo to me explaining what it means to divest from fossil fuels, what this movement is all about and explain the pros and cons. I know you have read about the divestment campaign. I have taken a quick look at this website, <http://gofossilfree.org/>, but just don't have the time to explore it in any depth. That's why I am asking you to write a one-page informational memo for me. What should I know about this effort? How did it start? Who is supporting it? Who is not supporting it? What reasons do the supporters and detractors use to bolster their advice? Give me some talking points so I can be informed when this topic comes up among my colleagues.

For now, I am not looking for advice. I just need information. Because turnitin.com is a convenient place to store communications, if you would like to submit a draft memo for me to comment on, upload it to turnitin.com before 9 AM on March 11. If you are comfortable just submitting a final memo, upload it turnitin.com no later than 9 AM on March 25. Please cite your sources (in-text and at the end of the memo) so that I can refer to them if necessary.

Here is the information you will need to use turnitin.com.

Class ID = 7524854  
Password = ba430jacs14

Thank you for your hard work.

## Appendix 4

To: Finance Students  
From: Father Fitzgibbons (Acted by S. Jacobson)  
Date: March 26, 2014  
Re: Fossil Fuel Divestment and Regis University

Thank you for your insightful summary of the debate about divesting from fossil fuel companies. Now I would like you to advise me whether or not Regis University should commit to divesting. One consideration that seems important to me is whether or not divestment might lower returns on our portfolio and weaken our ability to accomplish our educational mission. However, I realize that returns are not the only issue. After all, we would not violate our ethical standards just to make a higher return.

Please provide me some data on the impact divesting might have on our investment performance and then weigh that along with all the other considerations to advise whether or not we should get started. Please give me a clear answer that is supported by specific analysis of both the financial and ethical considerations surrounding this issue. Don't forget to cite your sources so that I can follow up on the specific issues that strike me as compelling.

Thank you for your time and continued effort to improve Regis University.

---

Along with this memo I have supplied you with stock price data from five fossil fuel companies from the top 10 fossil fuel companies at <http://gofossilfree.org/companies/> and five companies chosen from Ethisphere's list of the world's most ethical companies at <http://ethisphere.com/worlds-most-ethical/wme-honorees/>. These companies were matched approximately by market capitalization because we know that market capitalization can be an important determinant of returns on stocks. Please analyze the performance of the two portfolios – one with five fossil fuel company stocks in it and one with five SRI companies in it. Look at risk and return for these two portfolios for the last 10 years and the last five years. Then use this data in your memo to Father Fitzgibbons. (I realize that this is not a complete analysis of the issue of returns, but it gives you an idea how someone might approach this problem with real world data rather than doing simulations like those Kritzman discusses.)

Your draft memo is due April 3<sup>rd</sup> before 9 AM at turnitin.com. (Note that this is two days later than the original course schedule said.)

Your final memo is due April 8<sup>th</sup> before 9 AM at turnitin.com. Put your spreadsheet analysis in the Dropbox at [online.regis.edu](http://online.regis.edu).

Please do what you have to do to make sure that your memo is turned in on time at turnitin. It is not fair (and it's annoying) for some people to request and be given extra time because they "get behind" or "forget." If a meteor hits you, that's one thing. Bring me a note from a cosmologist. If not, set your smartphone alarm now to remind you to get this done on time.

Class ID = 7524854

Password = ba430jacs14

## REFERENCES

“A Framework for Thinking Ethically.” Scu.edu. Web. 1 July 2015.  
(<http://www.scu.edu/ethics/practicing/decision/framework.html>)

“Commitments.” gofossilfree.org. Web, 1 July 2015. (<http://gofossilfree.org/commitments/>)

“Divestment Statement.” Rfb.org. Web. 1 July 2015. (<http://www.rfb.org/content/divestment-statement>).

Francis, Holy Father. “On Care for our Common Home.” w2.vatican.va. Web. 1 July 2015.  
([http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)).

“Go Fossil Free.” Greenamerica.org. Web. 1 July 2015.  
(<http://www.greenamerica.org/fossilfree/>).

Kritzman, Mark. “What Fossil-Fuel Divestment would Cost,” Chronicle.com, Web. 1 July 2015.  
(<http://chronicle.com/article/What-Fossil-Fuel-Divestment/137941/?cid=at>).

Rosenberg, Brian. “For College Endowments, Ethical Stands can be Complicated.”  
Chronicle.com. Web. 1 July 2015. (<http://chronicle.com/article/For-College-Endowments/137939/>).