The Effect of Gender on Ethical Investing

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The Effect of Gender on Ethical Investing

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Undergraduate Honors Thesis
Spring 2020

Peter T. Paul College of Business and Economics University of New Hampshire
Table of Contents

I. Abstract .................................................................................................................. 3

II. Introduction ............................................................................................................ 4

III. Literature Review ................................................................................................ 5
    a. Gender and Risk Tendencies ........................................................................... 6
    b. A Brief History of Ethical Investing ................................................................. 7
    c. Scandals and Investor Response ...................................................................... 9

IV. Research Questions and Predictions .................................................................... 11

V. Data Collection and Methodology ........................................................................ 13

VI. Results .................................................................................................................. 15

VII. Conclusion/Implications for Future Research .................................................... 18

VIII. References ......................................................................................................... 21

IX. Appendix ............................................................................................................... 23
Abstract

Prior literature related to gender and risk propensity would suggest that females are risk-averse, compassionate, and value ethics over return. This ideology of traditional gender norms stereotypically implies that females may be more likely to engage in ethical investing, as there is inherently less risk in investing in companies with strong corporate social responsibility. On the other hand, males are often portrayed as risk-seeking, competitively motivated, and valuing profits over principle, thus may be more willing to compromise ethics if the ends justify the means. The following paper seeks to investigate this relationship between gender and ethical investing, as examined by a study of business students. Respondents were randomly distributed a survey with either an environmental scandal, a personal ethical scandal, or no scandal at all and were prompted to select a portfolio of four stocks with the various financial and ethical positions. The study results contradicted the hypothesis that female students were more likely to respond to the ethical scenario and revealed that it was the males who were more responsive. The study also indicated that the participants were more concerned about environmental scandals than personal ethical scandals, such as an embezzlement incident. The results most likely represent a shift in dynamics where Millennials and Generation Z are generally more socially conscious than prior generations of investors.

Keywords: finance, gender, ethical investing, environment, embezzlement
Introduction

Out with the Old Boys Club of Wall Street, and in with the new. What once was a predominately male industry has evolved over the last few decades with increased female representation. Regardless of gender, financial professionals, especially in film, are often portrayed and stereotyped in a negative light. Hollywood and the media constantly surround stockbrokers and investment bankers with corruption, greed, and wealth. Investors, portfolio managers, wealth specialists always seem to want to do whatever it takes to maximize their profits. Are finance professionals more likely to assume more risk if it means higher return, regardless of if the ends justify the means, so to speak?

There has been another drastic shift in the finance world from this way things may have been in the past, aside from just increased diversity. With many corporations taking a more ethical and socially responsible approach to business operations in recent years, investors are following suit. There is now a new analysis factor that investors consider as they attempt to maximize return: Environmental, Social, and Governance (ESG), which measures the success of the firm in these three categories. Socially responsible investing was an idea born from religious groups, who wanted to ensure their investments aligned with their beliefs and values. The concept has since evolved to incorporate not just religious issues, but broader ethical matters, in both the social and environmental categories. The following paper seeks to examine the relationship between ethical investing and maximizing return, and more specifically study the weight placed on both of these factors by a sample of business students at the University of New Hampshire.

The research for this study was conducted using an online survey, where respondents were prompted to select a portfolio of four fictional firms with randomly distributed different
versions of a scandal in each survey: emissions, embezzlement, and no scandal. While it was hypothesized that females would be more socially conscious than males and place a higher value on the ethics of a firm when selecting a portfolio, the results revealed it was the males who were more responsive to the ethical dilemmas, as reflected by their portfolio allocation. Additionally, another hypothesis was disproved when the results indicated that finance students invested less money in the ethically questionable stocks, despite their financial performance and more in the eco-conscious, lesser performing stocks, when compared to non-finance business majors. Overall, students were shown to care more about the environmental scandal than the embezzlement scandal, which aligned with the hypothesis that environmental issues are perceived as more important by the sample generation. In the following paper, these results will be further illustrated and explained, using the social and historical contexts of gender and ethical investing.

**Literature Review**

The literature reviewed as part of this research seeks to provide a background for male and female risk propensity and decision making within the financial industry. This will serve as the context for understanding how an individual’s risk tolerance and moral compass influences their stock selection, hopefully answering the aforementioned question: do investors value return over ethics, when it comes down to it? The literature also explores a brief background of gender studies and the development of women in finance to understand how stereotypes have evolved and shaped the way males and females are perceived in business. There will also be a focus on the history of socially responsible investing and how it has grown to prominence over the last
few decades, in order to understand its role in the industry and how it is gaining traction as corporations are striving to have a more positive societal and environmental impact.

**Gender, Ethics, and Risk Tendencies**

One important backdrop for this research about gender and investing is how difficult it is to change preconceived values within a society. In this case, those values are gender norms and stereotypes. Gender inequalities exist in society based on the limited access women have to certain resources in relation to the access that men have (Van Staveren, 2001). For example, females tend to be more concentrated in flexible jobs (part-time), that also happen to be low paying, to accommodate for their other normative “feminine” duties, such as childcare and homemaking (Van Staveren, 2001). Furthermore, women tend to borrow and save less for this same reason: an obligation to provide for their children and putting those needs above their own (Van Staveren, 2001). The role of their financial advisor is primarily focused on discussing their fears of having enough to support their family, or more commonly the fear of not having enough money to last through retirement (Skinner, 2016).

The knowledge women have about financial services usually correlates directly to their wealth, marital status, and professional role (Skinner, 2016). That said, men are often the primary targets for information about financial services products such as investment and savings plans because they are usually the breadwinners, while females receive less education on those services (Van Staveren, 2001). This, in turn, creates an imbalance in the macroeconomy by allowing for less GDP stimulation from the female workforce and lack of use of financial services by women (Van Staveren, 2001). On the other hand, of the women who are the primary source of income for the household (about 38% according to a 2009 report by the Bureau of
Labor), more than two-thirds believe they are “extremely knowledgeable” of financial services products (Skinner, 2016).

Another interesting factor to consider as part of the background for this research is the relationship between gender and risk tendency when making financial decisions. The research conducted as part of the study “Gender differences in risk behavior in financial decision-making: an experimental analysis” finds that generally females seek less risk than males, but while the two genders may seek different strategies, that strategy does not necessarily impact the final performance [of a portfolio] (Powell et. al, 1997). Other studies concluded that contradictory to traditional stereotypes, females in finance do not make less risky financial choices than males, but rather the risk propensity was determined based on the decision frame (Schubert et. al, 1999). Women tend to have less risky investment portfolios because their wealth advisors, asset managers, financial professionals, etc. have offered them less risky options under this preconceived bias that women want to take less risk (Schubert, et. al 1999). Contrary to this, a more recent study conducted in 2016, cited that single women with investable assets of greater than $1 million considered their risk tolerance to be above average (Skinner, 2016). Thus, it is not gender that determines risk propensity, but rather relative wealth and financial status (Skinner, 2016).

A Brief History of Ethical Investing

Socially Responsible Investing (SRI) stems from religious doctrine dating back centuries, encouraging practitioners to invest only in businesses that aligned with their religious values (Schyndel, 2019). It began to gain traction in the modern financial markets during the Civil Rights Movement of the 1960s and has been steadily rising to fame for investors of all
THE EFFECT OF GENDER ON ETHICAL INVESTING

backgrounds, regardless of political or religious affiliations (Townsend, 2017). Blaine Townsend of Bailard Wealth Management states in his article, “At its inception in North America, civil rights-era thinkers, faith-based organizations and women were SRI’s most strident evangelists; specifically, women investors, women entrepreneurs and orders of Catholic Sisters (Townsend, 2017). This logic could indicate that females are more likely to engage in ethical investing in the context of the study of UNH students conducted.

ESG (corporate sustainability) is just one pillar of socially responsible investing, with the others being values-based avoidance screens and corporate engagement/impact investing (Townsend, 2017). Socially responsible investing is becoming more common due to changing consumer preferences, and thus is becoming more profitable (Tu, et. al, 2020). The reason this type of investing, ESG investing, is offering a higher return is because its value goes beyond the financial gains and is leading to gains outside of the financial world, like societal and environment impact (Tu, et. al, 2020). When an investor is choosing a portfolio to try to maximize return, they are betting on an unpredictable outcome (Tu, et al. 2020). At the same time, with ESG investing, there would be gains either way, even if not financial. Even if the stock performance is less than ideal, the investor is funding the corporation’s initiatives for social responsibility (Tu, et al. 2020).

Other studies link the rise in ethical investing directly to the increasingly younger workforce. While only 7% of Gen X and 3% of Baby Boomers have ESG investments, 17% of Millennials are investing based on the principles outlined by ESG investing (Faust, 2019). This Millennial trend has incited the interest of the older generations in investing based on corporate ethics, revealed by the data that nearly half of each of the aforementioned generations are interested (Faust, 2019). However, one key finding of this study in particular to note is that these
statistics represent investors themselves and not financial professionals. In cases where an individual investor said they consulted a financial professional about ESG investing, 69% of those conversations were initiated by the individual and not the advisor (Faust, 2019). This may suggest that ethical investing is not as widely adopted within the financial services industry as might be expected.

Scandals and Investor Response

It is crucial to further explore the concept of scandal in order to understand how investors will respond to them. Scandals are defined as “rare events occurring at the apex of corporate fame when managerial fraud suddenly emerges in conjunction with a significant gap between perceived corporate success and actual economic conditions” (Zona, Minoja, and Coda, 2013). While the list of these incidents seems to be ever-growing, especially in light of recent advancements in technology, the following are the most common causes of financial scandals within corporate organizations are as follows: fraudulent financial reporting, theft, bribery, manipulation of the market, and insider trading. (Rockness, 2005). A scandal may result when there is a shift away from societal or organizational norms, which is fairly common given that so many companies have been ruined from unethical behaviors despite a clearly defined corporate code of ethics (Sims, 2009).

In “The Role of Ethics in Finance,” the author, John Dobson, attempts to define this concept of ethics in such a way that it can be concrete enough to apply it as a universal standard across the field of finance (Dobson, 1993). He argues that the motivation for all human behavior is personal gain, and consequently people only behave ethically if it is in their best interest to do
The effect of gender on ethical investing so (Dobson, 1993). He says that any company that adopts the financial-economic theory, therefore produces a culture that is governed by materialism, rather than ethics (Dobson, 1993).

But, if people supposedly know and understand the difference between ethical and unethical behavior, why do they choose to engage in behaviors that jeopardize their personal reputation and the reputation of the firm, alike? Howard and Joanne Rockness suggest that this is the result of employees who are incentivized “by personal gain, ego and greed illustrated by opportunistic and exploitative executive behavior to achieve personal objectives (Rockness, 2005, p. 32). Ultimately, this behavior is stemming from the upper management of these deemed unethical firms (Rockness, 2005).

“Comparative Perspectives on the Ethical Orientations of Human Resources, Marketing and Finance Functional Managers” seeks to identify the various ethical behaviors of different professions within the subcategory of business, such as marketing, human resources, and finance (O’Higgins, et. al., 2005). The article identifies how finance professionals are driven more so by performance, and therefore can be more likely to compromise their ethics, if the ends justify the means, so to speak (O’Higgins, et. al., 2005). However, their study found that within finance and human resources especially, management was more disapproving of unethical behavior than in marketing (O’Higgins, et. al., 2005). These results were based off of the more stringent regulations and consequences that have come about in response to recent financial scandals (O’Higgins, et. al., 2005).

Recent data has also indicated a trend towards consumers wanting more transparency when it comes to corporations. Many brands are not only expanding their corporate social responsibility (CSR) programs, but they are also providing transparency and insight into their supply chain and labor conditions (Kang, et al., 2013). Consumers are willing to support
companies and brands they “trust” because of their transparency, even if there have been ethical lapses made by that corporation (Kang, et al., 2013).

Reputation plays a significant role in the consumer and public perception of a firm before, during, and after a misconduct within an organization. The article “Toward a Better Understanding of Organizational Efforts to Rebuild Reputation Following an Ethical Scandal,” written by Ronald Sims during the Great Recession, attempts to explain the role of a scandal upon the reputation of a company. Sims includes interesting statistics to help illustrate the weight that a reputation carries, citing facts like 63% of the market value of a corporation is attributed to reputation and reputation risk is twice the risk posed by terrorism, foreign exchange, nature, or politics (Sims, 2009, p. 455).

While a good reputation is directly linked to high fiscal performance, it is important to understand how easily things can take a turn for the worst if a scandal arises. But, “how corporations and their leaders respond after a scandal occurs…is important for determining how long-lasting and pervasive the impact of a scandal will be on a firm’s reputation” (Sims, 2009, p. 455). In other words, regardless of a previous reputation, whether good or bad, the response of the management will directly influence the reactions and perceptions of other stakeholders, including consumers and investors.

**Research Questions and Predictions**

This research seeks to investigate the differences between how males and females respond to ethical scandals in relation to the attractiveness of an investment. Prior research in gender studies have concluded that women generally tend more towards compassion and nurturing, based on established gender norms where women were objectified for their innate
mothering and homemaking duties. On the other hand, men were traditionally recognized as the breadwinners: protectors and hunters who were supposed to provide for the family. Furthermore, previous cultural norms and stereotypes would suggest that females are risk-averse, compassionate, and value ethics over returns, while males are risk-seeking, competitively motivated, and value profits over principle.

Obviously, in today’s society this is no longer the standard, nor the norm. Parenting and professional development are viewed as independent, based solely on personal choice. However, are these predetermined gender norms so ingrained in our being and culture that they correlate to risk propensity in a modern society? This aforementioned ideology would suggest that females in finance are less likely to invest in stocks that have experienced ethical issues. While on the other hand, males are more responsive to the potential returns and profitability, regardless of the firm’s ethical performance.

This ethical bias among genders is increasingly interesting based on the changing dynamics of the finance world. As more females enter the industry, it could affect the landscape of investing, which impacts several other factors, including the economy as a whole. The purpose of this study is to illustrate the differences in decision-making and motivations between female and male investors. This will be observed by having students “invest” in certain companies and create a portfolio given certain ethical and profitability conditions of specific companies. Based on the reviewed literature on this subject, the following hypotheses were created:

**Hypothesis 1**: Females will be more likely to respond to the ethical scenarios by electing in safer stocks, while males will tend towards the higher performing stocks, regardless of their ethical conditions.
**Hypothesis 2**: Finance majors will select a portfolio based on its projected return rather than ethical orientation, while non-finance majors will weigh the scandal’s impact as more significant to the overall portfolio performance.

**Hypothesis 3**: Students will be more sensitive to the emissions scandal than the embezzlement scandal, due to the adverse impacts it could cause on not just an economic level, but for its global environmental scope.

**Data Collection and Methodology**

The data collected for the purpose of this experiment was primary data, using an online (Qualtrics) survey of students within the Peter T. Paul College of Business and Economics at University of New Hampshire. The target subjects were primarily aged 18-22. This is an appropriate sample to study as it is the group next to enter the workforce. Subjects likely have a unique set of values, based on the circumstances of their childhood bridging across two centuries, with Y2K and Dot Com Bubble central to this time. The creation of the Internet and its quick rise to prominence has sparked a massive transformation throughout the globe, throughout all sectors and industry, and especially the financial industry. The results of the experiment will provide significant insight into the ethical behaviors of aspiring business and finance professionals.

A short survey (included in the Appendix section) was distributed via an email link to the entire Paul College student body, approximately 2,400 business students. The data collection period lasted 10 days. The participants were first prompted to provide some identifying information such as age, gender, major/minor, and year of graduation. The survey also asked the
respondent to provide their favorite class taken at UNH, which would reveal their background education and interests they have outside of Paul College, potentially indicating any inclination or biases they have towards sustainability, ethics, etc.

After collecting basic data about the respondent, the survey proposed a brief scenario to which the respondent answered some follow up questions, acting as a portfolio manager. The subjects were prompted to read a brief description of four fictional “publicly traded” companies and the related financial information. Acting as the financial manager, the participant had to select a portfolio of the following four stocks based on the given financial and firm information:

1. **EcoSole**, based out of San Diego, California is a footwear firm that uses recycled plastic to manufacture their performance footwear. They are committed to sustainability and source most of their plastic from trash collected from the ocean.

2. **Peaberries** is a US-based chain of café-style coffee shops that use the finest quality ingredients to produce their handcrafted drinks and treats. The firm works very closely with farmers in developing countries to ensure the ethical production and sourcing of their coffee beans.

3. **APParel** is a startup ecommerce clothing company, headquartered in Chicago, Illinois. The firm is focused on reducing the effects of the garment and textile industry on the environment by offering low-cost, yet sustainably produced fashion.

4. **Reclaimed Space** is a home goods and furniture retailer that prides themselves on their responsible sourcing and production of goods, using primary recycled and upcycled materials to produce their goods. They have locations throughout the country, but primarily operate on the East Coast.

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There were three versions of the survey, randomly distributed to participants using the built-in randomizer on the Qualtrics survey software. In one version of the survey, the scandal was related to environmental issues/climate change. It was revealed that the transportation and supply department of the most profitable and attractive firm, Peaberries, was caught falsifying emissions reports and 2019. It was stated that there would be no impact on future stock returns. In the second version, the scandal was a personal ethical dilemma. The CEO was caught embezzling funds from the company’s cash accounts and was immediately removed, also resulting in no predicted impacts on their future returns. There was also a control group where the company information was provided with no additional scandal. The participants allocated their $1000 using information provided.

The survey was designed so that Peaberries would have been the obvious best choice to invest in, had there been no scandals, based on its high return and moderate risk. How the students allocated their portfolio may indicate their ethical perceptions, whether they chose to invest on return, ethics, or something else. A space was provided for respondents to include an optional brief description of their selections.

Results

There were 265 participants in the survey with a gender breakdown was 44% male and 55% female, as shown in Exhibit 1 of the appendix. Over 60% of the students recorded their graduation year as 2020 or 2021, indicating that a majority of the participants were juniors and
seniors and likely had taken more classes towards their major. As shown in Exhibit 4, approximately 26% of respondents were finance majors, which was the largest group, followed by accounting, and then marketing. About 21% of respondents cited their major as “Other,” which is due to the fact that they are double majors. When reviewing in the typed responses in the other category, most students listed both of their options, rather than selecting two of the listed majors.

Table 1 of the Appendix shows the average results of all of the participants and includes the n value for each version, which represents the number of students that received each version. Peaberries was most popular choice of investment in the control version with $503.39 invested on average. The investment dropped to $424.08 when the embezzlement scandal was introduced, and even more significantly to $289.23 when the emissions scandal was introduced. The percent change in investment from control to scandal are -15.76% and -42.52% respectively, illustrating that the respondents were more responsive to the environmental scandal.

In Table 2, the results are broken down by male and female respondents, and again the n value is provided. The number of males and females that received each version is pretty similar and evenly divided, so it is reasonable to compare these two. The data reveals that males on average invested more money than females in Peaberries, almost $200 more in the control group. This shows that males may be more enticed by the strong financials of Peaberries than males. However, when the scandal was introduced, it is critical to highlight how the males were significantly more influenced than females. The investment in Peaberries dropped by almost half for the environmental scandal, at 49.91% and 23.24% for the embezzlement scandal. The females portfolio only decreased by an average of 32.96% for the emissions and a miniscule 5.55% for the embezzlement. From this, we see that although males may gravitate towards
higher returns with lower risk (Peaberrys), they are more affected by scandals and adjust their portfolio accordingly, in more instances than females.

When the finance majors (26.29%) were separated out and compared to the non-finance majors, it also produced an unexpected result, as shown above in Table 3. The finance majors were more reactive to scandals than non-finance majors. Again the trend followed as in the case above, finance majors were initially more intrigued by the attractive financials of Peaberrys, and invested a significant portion, $621.43 on average, to bolster the returns on the portfolio, whereas non-finance majors invested an average of $466.67. The finance students decreased the average investment by 51.72% with the emissions scandal and 27.34% in the embezzlement. The non-finance students decreased their investments by only 38.79% and 11.25%. This suggests that finance majors may be more ethically sensitive than non-finance majors, contradicting the original hypothesis.

The final table, Table 4 analyzes Finance and Non-Finance majors vs Male or Female. It compares the results of Female Finance, Male Finance, Female Non-Finance, and Male Non-Finance. From the data, it is show that Male Finance students are the most reactive subset to the emissions scandal, reducing their investment by 60.61%. It is important to note here that this same group had the highest dollar amount invested in the control Peaberrys survey at an average of $707.14 out of the total $1000 allotted. Non-finance males were the next most responsive to the emissions scandal, decreasing their investment by 45.42%. For the embezzlement version, these same two male groups dropped by 32.47% (finance) and 19.91% (non-finance). When looking at the finance females vs nonfinance females, the investment was reduced, respectively, by 39.33% and 30.57% for the environmental issues, and only 23.72% and 2.50% for the CEO embezzlement. While respondents were more reactive to the emissions test falsification scandal
than the embezzlement issues, we can deduce that the males are more reactive than females to corporate ethical issues overall, and finance majors are more responsive than non-finance majors.

Exhibits 6, 7, and 8 of the appendix show the total portfolio allocation of each of the three versions of the survey. In the illustration of the control survey, Exhibit 7, a total of $29,700 was invested in Peaberry’s, the most financially attractive firm. This value dropped to $20,780 in the version with the embezzlement scandal, and fell again, more significantly to $15,040 in the emissions scandal version. This shows that overall the students were more reactive to the environmental scandal than the embezzlement scandal, and the scandal definitely influenced their portfolio selection. In the cases where they did put money into Peaberry’s, the respondents allocated their $1000 more evenly across all four companies and cited diversification as a reason.

In conclusion, the results of the survey contradicted both hypotheses. When the results were split into gender, it was revealed that males were more sensitive than females to an ethical scandal in general. The survey also demonstrated the correlation that finance majors were more reactive than non-finance majors. Thus, the most ethically sensitive group was the male finance students.

**Conclusion/Implications for Future Research**

Because this study took place specifically within a single university (University of New Hampshire), there may be implicit biases within the results, based on the courses taught and the particular code of ethics that Paul College instills upon its business students. However, it is safe to assume that these results would remain fairly constant across a peer-group of individuals in any college or university across the country, based on the conditions this generation has grown up with.
Though the results determined that females were generally more socially conscious than males, there was an ethical response across both genders, which may be incongruent with more outdated studies and literature. It is critical to understand how the age factor potentially creates a skew in the data towards more ethically oriented responses overall. Generation X, the sample studied, is generally more socially conscious than prior generations of investors.

The ease of access to unlimited information in today’s world of technology plays a role in analyzing the results of this study. The term public disclosure has evolved significantly over the last several decades based on how fast information can be broadcasted to its consumers via their smartphones, whether it be through social media, news alerts, etc. Corporate information, which may include ethical orientation (i.e. scandals), is now not only published in the financial reports and analyzed by the financial professionals. Instead, it is easily absorbed by the general population through the aforementioned outlets. The implication on this study, is that the survey population is all college-aged individuals who we can assume have grown up in this world of constant virtual contact and social media. Their social and political views have been cultured by what their friends “share” to them and they have formulated these views based on real-time reactions, “likes,” “dislikes,” and “comments” of people they look up to, be it celebrities, peers, or other.

The results and conclusions from this simple portfolio selection study has shown that the dynamics are changing, and stereotypes are being disproven. The young professionals observed in this study will enter the workforce and cause major disruption away from performance-based thought process and more towards a moral and ethical orientation. The sample population of business students understands the criticality of maintaining the environment and are more likely to value those issues over their own personal gains. These students are the future. They are the
future of not only social change, but of economic and political change. Their views as they stand, have been formulated just by their college classes and the little life experience they have. But as this generation begins to enter the workforce, they will apply their unique and fresh perspective to their professional experiences to implement larger societal change.
References


THE EFFECT OF GENDER ON ETHICAL INVESTING


Tu, S., Costa, M., Kuchtyak, M., Callagy, R., Pinto, M., Harris, S. (2020) Beyond passive, ESG investing is the next growth frontier for asset managers. *Moody’s Investors Service.*


Appendix

Exhibit 1: Survey

Q1 What is your age?

- 18
- 19
- 20
- 21
- 22 or older

Q2 If older than 22, please indicate how old:

________________________________________________________________

Q3 Please indicate your gender:

- Male
- Female
- Other

Q4 What is your intended year of graduation?

- 2020
- 2021
- 2022
- 2023 or later
Q5 What is your intended major?

- Accounting
- Entrepreneurial Studies
- Finance
- Information Systems & Business Analytics
- International Business & Economics
- Management
- Marketing
- Undeclared
- Other ___________________________________________

Q6 What is your Intended Minor?

________________________________________________________________

Q7 What has been your favorite course at UNH?

________________________________________________________________

________________________________________________________________
Q8 Please read the descriptions of four publicly traded companies within the consumer discretionary industry and note the figures listed.

**EcoSole (Firm A)**, based out of San Diego, California is a footwear firm that uses recycled plastic to manufacture their performance footwear. They are committed to sustainability and source most of their plastic from trash collected from the ocean.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Income (Million)</th>
<th>Estimated Return (%)</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>$80</td>
<td>55%</td>
<td>High</td>
</tr>
</tbody>
</table>

**Peaberries (Firm B)** is a US-based chain of café-style coffee shops that use the finest quality ingredients to produce their handcrafted drinks and treats. The firm works very closely with farmers in developing countries to ensure the ethical production and sourcing of their coffee beans.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Income (Million)</th>
<th>Estimated Return (%)</th>
<th>Rating</th>
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<tbody>
<tr>
<td>2019</td>
<td>$190</td>
<td>95%</td>
<td>Medium</td>
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</table>

**APParel (Firm C)** is a startup ecommerce clothing company, headquartered in Chicago, Illinois. The firm is focused on reducing the effects of the garment and textile industry on the environment by offering low-cost, yet sustainably produced fashion.

<table>
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<th>Year</th>
<th>Net Income (Million)</th>
<th>Estimated Return (%)</th>
<th>Rating</th>
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<tr>
<td>2019</td>
<td>$40</td>
<td>30%</td>
<td>Low to Medium</td>
</tr>
</tbody>
</table>

**Reclaimed Space (Firm D)** is a home goods and furniture retailer that prides themselves on their responsible sourcing and production of goods, using primary recycled and upcycled materials to produce their goods. They have locations throughout the country, but primarily operate on the East Coast.

<table>
<thead>
<tr>
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<th>Net Income (Million)</th>
<th>Estimated Return (%)</th>
<th>Rating</th>
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<tr>
<td>2019</td>
<td>$60</td>
<td>35%</td>
<td>Medium</td>
</tr>
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</table>

**Survey A - Emissions**

Q8 In August of 2018, it was revealed that the transportation and supply department of Peaberries was falsifying their emissions tests that show that their company was carbon neutral, when in fact their transportation vehicles were emitting 50% more carbon than industry standards. While the stock price dropped upon discovery of the falsified tests in August 2018, the incident is not expected to affect future stock returns.

**Survey B - Emissions**

Q8 In August of 2018, it was revealed that the now-former CEO of Peaberries was embezzling funds from the firm’s cash accounts. It is expected he will be convicted of a felony and serve a prison term. While the stock price dropped upon discovery of the embezzlement scheme in August 2018, the incident is not expected to affect future stock returns.
Q9 Assume that you are a portfolio manager and you have $1000 to invest. How would you divide your investment in the companies listed above using the information stated? **Please list the dollar amount you would invest in each firm next to the firm name.**

Firm A: EcoSole: _______
Firm B: Peaberrys: _______
Firm C: APParel: _______
Firm D: Reclaimed Space: _______
Total: _______

Q10 Use the box below if you wish to briefly describe the selections you indicated above.

______________________________________________________________________
Exhibit 2

Gender Breakdown

- Male: 44.44%
- Female: 55.16%
- Other:
Exhibit 3

Age of Participants

- 18: 33.46%
- 19: 17.11%
- 20: 17.49%
- 21: 5.70%
- 22 or older: 26.24%
Exhibit 4

Expected Year of Graduation

- 2020: 32.14%
- 2021: 29.76%
- 2022: 13.10%
- 2023 or later: 25.00%
Exhibit 5

Intended Major of Participants

- Accounting: 15.94%
- Entrepreneurial Studies: 1.59%
- Finance: 26.29%
- Information Systems & Business Analytics: 20.72%
- International Business & Economics: 6.37%
- Management: 3.59%
- Marketing: 7.57%
- Other: 1.59%
- Undeclared: 16.33%
Exhibit 6

Total Portfolio Survey 1

Firm A: EcoSole

10,950

Firm B: Peaberrys

15,040

Firm C: APParel

13,605

Firm D: Reclaimed Space

12,405
Exhibit 7

Total Portfolio Survey 2

Firm A: EcoSole

Firm B: Peaberrys

Firm C: APParel

Firm D: Reclaimed Space
Exhibit 8

Total Portfolio Survey 3

Firm A: EcoSole

Firm B: Peaberrys

Firm C: APParel

Firm D: Reclaimed Space
# Table 1: All Results

<table>
<thead>
<tr>
<th>All Results</th>
<th>Emissions (1)</th>
<th>Embezzlement (2)</th>
<th>Control (3)</th>
<th>3 v 1</th>
<th>3 v 2</th>
<th>3 v 1 %</th>
<th>3 v 2 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>EcoSole</td>
<td>n=52 210.58</td>
<td>n=49 191.51</td>
<td>n=59 150.85</td>
<td>59.73</td>
<td>40.66</td>
<td>39.60%</td>
<td>26.95%</td>
</tr>
<tr>
<td>Peaberry</td>
<td>289.23</td>
<td>424.08</td>
<td>503.39</td>
<td>-214.16</td>
<td>-79.31</td>
<td>-42.54%</td>
<td>-15.76%</td>
</tr>
<tr>
<td>APParel</td>
<td>261.63</td>
<td>185.78</td>
<td>198.31</td>
<td>63.32</td>
<td>-12.53</td>
<td>31.93%</td>
<td>-6.32%</td>
</tr>
<tr>
<td>Reclaimed Space</td>
<td>235.56</td>
<td>198.63</td>
<td>147.46</td>
<td>88.1</td>
<td>51.17</td>
<td>59.75%</td>
<td>34.70%</td>
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</table>
Table 2: Male/Female Results

<table>
<thead>
<tr>
<th></th>
<th>Emissions (1) n=28</th>
<th>Embezzlement (2) n=24</th>
<th>Control (3) n=28</th>
<th>3 v 1</th>
<th>3 v 2</th>
<th>3 v 1 %</th>
<th>3 v 2 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male EcoSole</td>
<td>207.14</td>
<td>172.25</td>
<td>92.86</td>
<td>114.28</td>
<td>79.39</td>
<td>123.07%</td>
<td>85.49%</td>
</tr>
<tr>
<td>Peaberrys</td>
<td>299.64</td>
<td>459.17</td>
<td>598.21</td>
<td>-298.57</td>
<td>-139.04</td>
<td>-49.91%</td>
<td>-23.24%</td>
</tr>
<tr>
<td>APPareel</td>
<td>296.61</td>
<td>176.38</td>
<td>192.86</td>
<td>103.75</td>
<td>-16.48</td>
<td>53.80%</td>
<td>-8.55%</td>
</tr>
<tr>
<td>Reclaimed Space</td>
<td>196.61</td>
<td>192.21</td>
<td>116.07</td>
<td>80.54</td>
<td>76.14</td>
<td>69.39%</td>
<td>65.60%</td>
</tr>
<tr>
<td>Male n=24</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female EcoSole</td>
<td>214.58</td>
<td>210</td>
<td>206.67</td>
<td>7.91</td>
<td>3.33</td>
<td>3.83%</td>
<td>1.61%</td>
</tr>
<tr>
<td>Peaberrys</td>
<td>277.08</td>
<td>390.4</td>
<td>413.33</td>
<td>-136.25</td>
<td>-22.93</td>
<td>-32.96%</td>
<td>-5.55%</td>
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<tr>
<td>APPareel</td>
<td>220.83</td>
<td>194.8</td>
<td>203.33</td>
<td>17.5</td>
<td>-8.53</td>
<td>8.61%</td>
<td>-4.20%</td>
</tr>
<tr>
<td>Reclaimed Space</td>
<td>287.5</td>
<td>204.8</td>
<td>176.67</td>
<td>110.83</td>
<td>28.13</td>
<td>62.73%</td>
<td>15.92%</td>
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### Table 3: Finance/Non-Finance

<table>
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<tr>
<th></th>
<th>Emissions (1)</th>
<th>Embezzlement (2)</th>
<th>Control (3)</th>
<th>3 v 1</th>
<th>3 v 2</th>
<th>3 v 1 %</th>
<th>3 v 2 %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Finance</strong></td>
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<td>EcoSole</td>
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<td>195.39</td>
<td>168.89</td>
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<td>22.97%</td>
<td>15.69%</td>
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<tr>
<td>Peaberrys</td>
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<td>-11.25%</td>
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<td>186.19</td>
<td>212.22</td>
<td>67.4</td>
<td>-26.03</td>
<td>31.76%</td>
<td>-12.27%</td>
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<td>152.22</td>
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<td>49.16%</td>
<td>34.18%</td>
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<tr>
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<td>180.77</td>
<td>92.86</td>
<td>126.37</td>
<td>87.91</td>
<td>136.09%</td>
<td>94.67%</td>
</tr>
<tr>
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<td>451.54</td>
<td>621.43</td>
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<td>-169.89</td>
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<td>-27.34%</td>
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<tr>
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<td>207.69</td>
<td>184.62</td>
<td>153.57</td>
<td>54.12</td>
<td>31.05</td>
<td>35.24%</td>
<td>20.22%</td>
</tr>
<tr>
<td>Reclaimed Space</td>
<td>273.08</td>
<td>183.08</td>
<td>132.14</td>
<td>140.94</td>
<td>50.94</td>
<td>106.66%</td>
<td>38.55%</td>
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</tbody>
</table>
Table 4

<table>
<thead>
<tr>
<th></th>
<th>Emissions (1)</th>
<th>Embezzlement (2)</th>
<th>Control (3)</th>
<th>3 v 1</th>
<th>3 v 2</th>
<th>3 v 1 %</th>
<th>3 v 2 %</th>
</tr>
</thead>
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<tr>
<td><strong>Finance Male</strong></td>
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<td>EcoSole</td>
<td>228.57</td>
<td>187.5</td>
<td>71.43</td>
<td>157.14</td>
<td>116.07</td>
<td>219.99%</td>
<td>162.49%</td>
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<tr>
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<td>707.14</td>
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<td>250</td>
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<td>121.43</td>
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<td>94.45%</td>
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<td>242.86</td>
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<tr>
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<td>410</td>
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<tr>
<td><strong>Non-Finance Male</strong></td>
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<td>63.20%</td>
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<td>n=18</td>
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<td>n=23</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-Finance Female</strong></td>
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</tr>
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<td>EcoSole</td>
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<td>220</td>
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<td>-14.78</td>
<td>-7.71%</td>
<td>-6.30%</td>
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<td>-10.61%</td>
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