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Course of Asset pricing

The beliefs of professional investors versus the clients on food waste reduction measures.

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Contents

Chapter 1: Introduction

The selection process in which investors choose their investments to be more sustainable has ever been a highly researched topic (Bauer & Smeets, 2015; Beal et al., 2005; Cheah et al., 2011; Haigh et al., 2008; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish et al., 2012; Rosen et al. 1991; Schueth, 2003; Tippet, 2001). Throughout the years it has become more and more prevalent that a specific part of investments, sustainable responsible investments, SRI, has become more and more important and a fast-growing market (McKinsey, 2017). Some large institutional investors have even already started to implement ESG factors in their screening process and have been benefiting from these actions ever since. As such that the use of ESG screening now used for 50 per cent of the sustainable investment selection process (McKinsey, 2017). One could however, wonder whether the selection process of sustainable investment should be merely focused on ESG and whether there wouldn't be more concrete measures to take into account. Bauer et al. decided to take this premise and used the United Nation's Sustainable Development Goals as a proxy for determining the willingness of pension fund members to increase the current scope of SDG screening (2021).

In the past years, one measure that becomes more and more prevalent is food waste. The United Nations (UN) has placed food waste on their sustainable development goals under target 12.3, which aims to reduce food waste by 50 per cent by the end of 2030. The UN has estimated that each year the cost of food loss and waste to be up to $940 billion per annum (UN news centre, 2016). A recent study by Gunders (2020) for the Natural Resources Defence Council, has found that in the United States alone, food waste accounts for a loss of $165 billion dollar each year. This accounts for 40 per cent of the total produced food within the United States (Gunders, 2020). Some have stated that this happens mostly at the consume end, however, it has been shown that less than a third of the waste occurs at the end consumer and thus two thirds of the losses occur in the industry. The foodservice industry, with a global market value of $3,246.8 billion, thus, are wasting a large percentage of their value and consequently, hampering their financial performance (MarketLine, 2019). Therefore, it could be hypothesized that companies that would invest in food waste reduction measures would have better performance and thus be a sounder investment for potential investors. Additionally, Gomez-Bezares et al. (2016) stated the following: "firms that incorporate sustainability issues into their business operations are better able to leverage their resources toward stronger financial performance and shareholder value creation than other companies''. Once again proving the financial benefits of implementing sustainable measures within company processes.

This thesis will contribute in the form of answering the unexplored field of food waste reduction measures' effect on acquiring investments from investors. As current research mostly focusses on the driving reasoning, whether this is financial or personal, behind choosing investments with sustainability measures in place, where this research will focus specifically on food waste reduction measure and whether this would

influence investment choices. Both for the business aspect as well as the academic aspect this is an interesting contribution as it would give more insight into the mind of the investors and their specific preferences. This could be used in the business aspect to portray their strategies regarding food waste more and at the same time receive more investments. Especially given the scope of difference in preferences between the professional investor and their client. This premise has also been confirmed by Paetzold et al. that stated that advisors and mediators in their role might be an important barrier for sustainable development by limiting sustainable investments of their clients by imposing their own opinions (2015).

1.1 Problem statement

After determining the literature gap and the research scope of the paper the following problem statement has been created:

Do food waste measures influence the investment selection process of investors?

From this problem statement the following sub questions have been derived:

1. Do professional investors associate food waste reduction measures with increased financial performance of their investment portfolio differently than their clients?
2. What value do professional investors award to the premise of food waste reduction measures in comparison to their clients?
3. Do investors deem the presence of food waste reductions more important than the potential loss of returns?
4. What are potential implications for companies and fund managers regarding food waste reduction related investments?

To answer these questions, this work will gather data from the survey and combine this with existing literature regarding investment selection theory.

The remainder of this thesis is structed as follows: the second chapter discusses the literature regarding sustainable responsible investments and investors preferences when selecting investments, the third chapter discusses the methodology of this study, the fourth chapter discusses the results and analysis, the fifth chapter discusses the findings with previous literature. Finally, the last chapter concludes this paper and discusses the contributions and limitations and fields for future research.

Chapter 2: Literature Review and Hypotheses

With multiple researchers and academic trying their hand at determining the impact of sustainability measures on financial performance (Mollet et al., 2013; Tang et al., 2012). Within their research, they found that there are multiple angles to cover when assessing the relationship between sustainability and financial performance. One could determine the level of sustainability within a company by purely determining the number of sustainable measures that are in place while on the other hand, one could determine the sustainability by assessing the engagement by gauging the dimension of CSR covered which are inherent to the internal structure of the company (Tang et al., 2012). Most of the research, however, is focussed on the broader picture; thus, lacks the in-depth information regarding specific topics within the sustainability spectrum. More specifically, most of the research regarding sustainability measures has focused on the financial returns.

The other angle, regarding the investor's perspective has been researched but still in broader terms such as willingness to invest in sustainable and responsible investment funds or the willingness to include more sustainable development goals. For example, Bauer et al. (2020) have researched the preferences of pension fund holders regarding the sustainable development goals. They found that the majority of the pension fund holders would prefer that their pension fund would increase the amount of SDG's covered from 3 to 4. This in contrary to the common believe regarding sustainable and responsible investments is that the returns on these investments are lower than their counterparts and that therefore investors would shy away from such investments. Additionally, Riedl & Smeets (2017), found that the main driver for investors to invest in sustainable responsible investments is due to strong social preferences.

This would hold up if the consideration is purely regarding the broader picture of investments where SRI funds underperform conventional funds (Riedl & Smeets, 2017). Recent research by Champions 12.3 (2017) in which they have done research regarding the financial performance of companies who have food waste reduction measures in place; they found that half of the 1200 companies saw a return of investment on food waste reduction measures of 1400 per cent or higher. Additionally, 99 percent of the companies that have invested in food waste reduction measures have had positive returns. This in combination with the earlier mentioned sheer amount of food waste in the industry, the link between financial performance and the potential benefit for investors regarding investing in companies that use food waste reduction measures becomes clearer.

Ethical investing, which has its roots in religions such as Judaism, Christianity and the Islam has been seen as the basis for the SRI investments one sees today (Dorfleitner & Nguyen, 2016). The development of SRI investments has been mostly sparked by the political climate of the 1960s (Renneboog et al., 2008). When looking at SRI, a given fact is that it is not arbitrary to deduct how investor choose their investments. For this the individual their personal beliefs, preferences and attitude come into play. In the past, Friedman & Savage

(1948) and Sharpe (1964) have stated that individuals seek to optimize their welfare, they depicted that such optimization has been achieved through balancing risk and return to their preferences. As also has been noted by Nilsson (2008) & Brimble et al. (2013), they stated that the most influential factors for selecting investments are risk and return for both conventional as well as sustainable investments.

However, Pasewark & Riley (2010) noted that other factors such as personal values are equal in terms of decision drives to risk and return. Thus, including non-monetary value and ethical objectives as investment goals. This theorem has also been strengthened by research from Pèrez-Gladish (2012) who found that when seeking non-financial benefits, they are still financially aware. When taking into account these premises, the same could be said for deciding whether to screen on SDG; thus, taking into account the way the investor values an investment and balances it to their own specific need. in This raises the question what value an investor gives to their investments and thus how he or she makes their decisions.

A common misconception of SRI is that it is considered charity as investments imply gaining a future benefit for something you are willingly giving up today (Nilsson, 2009). As investors can thus be seen as profit seeking and not as merely giving their money away. This, however, does not mean that investors investing in SRI are not willing to give up revenue. Webley et al. (2001) found further evidence that investors, who are investing ethically, have the need to invest in companies that are aligned with their personal values. They found that these types of investors are strongly committed to their investments and are even willing to give up a part of their earnings due to poor performance or ethically ineffective. Moreover, Haigh (2008) found that one in two respondents had chosen not to invest due to informational concerns, which unexpectedly was aimed towards social investment styles, portfolio listing and perceived accuracy of information whereas the management expenses of the company were deemed less important. This underlines the premise of Webley et al. (2001) stating they willingness to give up effectiveness of the company invested in.

In the previous paragraph the investment preferences of the individual investor have been described. As these factors have become more prevalent, one could only except the current trend within the investment industry, sustainable responsible investing. SRI investing has been seen as one of the faster growing segments of the past decades. This could be seen by the introduction of SRI mutual funds. These funds, which are actively screening their investments on social, environmental and ethical factors have become large players within the mutual fund industry (Sparkes, 2010). Recent report by The Forum for Sustainable and Responsible Investment (2020) have noted that currently ever 1 in 3 dollars of assets under professional management, in The United States, are invested using SRI screening, where this was still only 1 in 9 merely a decade ago. The growth seen in the SRI investment segment once again shows the importance of gaining a more in-depth knowledge of the SRI market. From the same source it can also be seen that the food waste reduction aspect has become more prevalent in the SRI market. When looking at increases from 2018 to 2020, sustainable resources/natural resources and agriculture grew by 81 per cent. This is the fastest growing assets under

management sector in the ESG criteria list. When looking at the current status of SRI Waring & Lewer (2004) stated the following: “the status of SRI has shifted from being a novelty financial product to become a major force in international equities markets”.

Taking into account the current SR-investor, Nilsson (2009) stated that there are three different segments of SRI investors. He argued that there is first, the SR investors that value financial return over social responsibility, primarily concerned about profit. Second, Investors that value social responsibility over financial return, primarily concerned about social responsibility. Lastly, the social and return driven, the give equal value to both the financial aspect as well as the socially responsible aspect of the investment. When considering the demographics of these investors, it has been found that they are more likely to be single, younger, less wealthy, and better educated than non-sustainable responsible investors (Beal et al., 2005; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish, 2012; Schueth, 2003). Furthermore Cheah et al. (2011) found that younger sustainable responsible investors, with high incomes and who attained higher education levels, are expecting at least the same returns from sustainable responsible investments compared to conventional investments. On the contrary, older men are less likely to choose to screen on more SDG, thus, less likely to invest more sustainable (Bauer et al., 2005). Additionally, Junkus & Berry (2010) therefore also mentioned that there needed to be additional efforts made to convince wealthier and male investors to the merits of socially responsible investing. As this study also takes into account wealthy investors, it would be interesting to see whether this proposition still holds or that the wealthier investor has since changed his preferences.

The role of the advisor has not only been stressed by Junkus and Berry (2010); even so, by Paetzold et al. (2015). They stated that salespeople might systematically deviate from their client’s interest in regard to social responsibility. This deviation from their role as mediators for their clients could be creating a barrier for investors to participate in investing ethically. Additionally, in such situations they would not be fulfilling their duties to be an objective advisor taking solely into account the preferences of their clients. Consequently, these deviations could lead to skewed capital allocation, limit the suitability of client’s portfolios and depress the role of SRI in financial markets. Such phenomena could be harmful towards the success of sustainable investment products available in the market.

When investigating the food industry specifically, it has been shown that it is more susceptible to crop reduction and yield reduction external shocks than other industries. Hong et al. (2016) have found that food stock is not correctly discounting the effect of droughts, thus external shocks, within their stocks. This results in food stock having poor profit growth in countries that experience higher drought. Therefore, they concluded that food stocks return predictability is consistent with food stock prices underreacting to climate change risk; thus, applying the same principle to food waste, one could expect a similar effect where prices underreact.

For SRI and ESG screening, one could also argue that these investments are sounder than their conventional counterparts. According to a report from Bank of America (2019) 90 per cent of the bankruptcies

on the S&P 500 between 2005 and 2015 could have been avoided by screening out companies with below average environmental and social scores five years prior to the events. This premise shows that the screening based on SRI, ESG and SDG factors are vital to ensure that the investee's funds are allocated towards companies that are more likely to succeed. Therefore, it is important to obtain an understanding whether investors and their clients see merit in the possibility of screening their investments on these factors prior to investing.

Previous research does however lack in the terms of insight into the preferences and considerations that investors make before selecting funds in terms of food waste specific measures. Therefore, the objective of this master thesis is the following: to determine whether food waste reduction measures have an impact on the decision making of investors when selecting companies to invest in. I hypothesize that, given the potential benefits of including food waste reduction measures within companies, investors are more willingly to invest in companies where such measures are present.

2.2 Hypotheses

If one would follow the prior research by Riedl & Smeets (2017). One would assume that investors would associate food waste reduction measures with lower returns. As, investors generally believe that higher levels of CSR have lower abnormal returns. However, given the premise that food waste reduction measures are in general positive for financial performance, the opposite could be true for the professional investors. In addition, taking into account the recent report from Bank of America (2019) which stated 90 per cent of the bankruptcies on the S&P 500 between 2005 and 2015 could have been avoided by screening companies on ESG matters, could strengthen the hypotheses that the informed investor associates the implementation of food waste reduction measures by companies with higher results.

H1 A (B): Professional investors associate the implementation of food waste reduction measures by companies with lower (higher) returns than their clients.

The same premise has been taken regarding the research conducted by Riedl & Smeets (2017) which depicted that financial returns are not necessarily the main driving factor behind choosing investments. In addition, following the statements from Webley et al. (2001), where they found further evidence that investors, who are investing ethically, have the need to invest in companies that are aligned with their personal values. They found that these types of investors are strongly committed to their investments and are even willing to give up a part of their earnings due to poor performance or ethically ineffective. Furthermore, Haigh (2008)

argued that investors investment choice is due to informational concerns, which unexpectedly was aimed towards social investment styles, portfolio listing and perceived accuracy of information whereas the management expenses of the company were deemed less important; thus, undervaluation of financial returns. As Paetzold et al. (2015) stated, salespeople might systematically deviate from their client's interest in regard to social responsibility. This deviation from their role as mediators for their clients could be creating a barrier for investors to participate in investing ethically. Junkus & Berry (2010) therefore also mentioned that there needed to be additional efforts made to convince wealthier and male investors to the merits of socially responsible investing. As this study also takes into account wealthy investors, it would be interesting to see whether this proposition still holds or that the wealthier investor has since changed his preferences. Therefore, the expectation is that investors deem the returns as less important and could be imposing this premise on their clients.

H2 A (B): Professional investors deem food waste reduction measures as more (less) important than financial returns than their clients.

The notion is that when investors value food waste reduction measures high, they are inclined to associate firms with these measures to have higher returns and thus more inclined to screen on such measures. As they value firms higher that are related to their own beliefs. In order to determine this premise, the data from the survey will be analysed.

H3 A (B): When investors value food waste reduction measures high (low), they are more (less) inclined to implement screening on SDG12.3.

For hypothesis 4, the premise is that when investors associate food waste reduction measures with higher returns, they are more likely to invest in firms that employ such measures. Following the theorem of Friedman & Savage (1948) and Sharpe (1964) in which they stated that individuals seek to optimize their welfare, they depicted that such optimization has been achieved through balancing risk and return to their preferences. As also has been noted by Nilsson (2008) & Brimble et al. (2013), they stated that the most influential factors for selecting investments are risk and return for both conventional as well as sustainable investments. For this, the data from the survey will be analysed. For both hypothesis 3 and 4, a multinomial logit regression will be used as demonstrated in Bauer et al. (2020).

H4 A (B): Investors that associate food waste reduction measures with higher (lower) returns, are more (less) likely to invest in companies that have food waste reduction measures in place.

For hypothesis 5, one could hypothesize that the investors are more to invest in companies that employ food waste reductions measures as these measures have positive financial returns. This hypothesis will be answered through the data retrieved from the survey.

H5 A (B): Investors are more (less) likely to invest in firms that have food waste measures in place.

Chapter 3: Research Design

3.1 Sample collection

This research studies whether the existence of food waste reduction measures, affect the choice of investors to invest in companies/stocks/funds. In order to determine this premise, this research uses the data from the personal network of Hilbert de Hoop, both in terms of current wealthy investors, through the investors network linked to Suite 25 as well as professional investors in the food service industry through the personal network of the researcher. The data will be collected through an online survey with the Qualtrics research suite.

Suite 25 is a family office owned by W. de Hoop-Van Dijk and K. Roeleveld. Suite 25 has a diverse clientele base with a dozen wealthy families with large investment portfolios. This has created a large network of private equity, investment banks and investment companies alike. Within this network I, the researcher, will be able to distribute my survey and therefore reach a broad sample regarding current investors.

3.2 representativeness of the sample

Survey faces the risk of being biased response sample. In order to overcome such problems. The whole clientele base of wealthy investors has been addressed of Suite 25 and a response of all 40 clients has been gathered thus reaching a response rate of 100%, ensuring that there is no bias in that sample. For the global population sample, I cannot fully control the response that comes in through all channels of distribution. Therefore, I will add control variables in my regression to ensure that the relative risk-ratios received from the regression are representative for the population. Additionally, one could consider that a setting in which I'm researching, social responsibility, might attract more response from individuals that have strong social preferences themselves. Therefore, strengthening the importance of performing additional test with controlling variables to ensure its representativeness.

3.3 Survey development

The Survey is designed to capture the preferences of both the professional investor(mediator) as the private investor(client) on the implementation of food waste reduction measures by companies. Former studies like Bauer et al. (2020) have asked their participants whether they wanted to add a fourth SDG into the screening process done by their pension fun. Others like (Lewis & Mackenzie, 2000; Webley et al., 2001) have tried do differentiate conventional investors from sustainable responsible investors. However, it is found that it is nearly impossible to differentiate between such investors as purely a signal of 1 sustainable fund in their portfolio does not signal that they are sustainable investors (Cheah et al. 2011). Therefore, the premise of sustainable investor versus conventional investor will be taken into account through asking them regarding whether ESG, CSR or SDG's every influenced their screening. This premise is taken from the research of Williams (2007), the Survey will first start off by investigating whether investors are already active in terms of screening their investments on these factors. With that I can add to the literature of sustainable investing in terms on new data on wealthy investors that invest through the SRI principles. Investors that do not see themselves influenced through ESG, CSR or SDG factor are thus noted as conventional investors; however, it is still interesting to see whether they would still be willing to add screening on SDG's after providing information regarding SDG. The Survey will contain 21 questions which are sorted as follows: the first part tested the knowledge and screening behaviour of the investor on ESG and CSR, the second part tested measure the preferences and believes of the investor regarding SDG 12.3 and SDGs in general, the third and final part collected socio-demographic information and their altruistic behaviour. The full questionnaire can be found in Appendix 1.

3.3 Knowledge and screening on ESG and CSR

The first part is compiled of 5 questions related to the participant's affinity to investing and their knowledge on ESG and CSR. They first were asked whether they are a professional(mediator) investor or a private investor (client). This is the first screening process to determine their position in the investing process. I first ask whether the investor has knowledge on ESG, if no knowledge they get shown an information slide, and after the information slide, they answer whether they screen their investments on these factors. The same technique has been used for the CSR factors in order to determine their knowledge and participation in screening. The questions are asked as follows:

Are you a private/professional investor?

A) Private
B) Professional
C) I do not know.

Are you familiar with the environment, social governance factors?

A) Yes
B) No

Do you take the ESG criteria into consideration when selecting investments?

A) Yes
B) No
C) I do not know.

As H1 and H2 are there to determine whether there is a difference between the client and the professional in terms of value and beliefs regarding the returns of SDG screening. It was thus vital to determine their position within the financial market.

3.4 The preferences and believes of the investor regarding SDG 12.3 and SDGs in general

The second part of the survey went into the core of the studies, for H1 to H5. Here the preferences and believes of the investors were tested. The main focus laid on the determination of their affinity with food waste reduction measures implementation and their perception of risk and return of companies that implement such measures. First the question was asked to what extend the investors values the implementation of food waste reduction measures by companies. Which resulted in the following question:

How do you as an investor deem the importance of food waste reduction measures by companies.

A) High
B) Medium
C) Low
D) Indifferent
E) I do not know.

The choice for using risk and return as main drivers for financial performance is based on the research of Sharpe (1964) and Friedman & Savage (YEAR). The question technique regarding composing the question to determine such measures has been taken from the research of Bauer et al. (2021. They argued that instead of asking directly about financial performance they would simplify the question and solely ask whether the

return would be higher with or without the addition of an SDG in the screening process. This same premise has been applied to this study and ask the following questions:

When do you think the investment return would be the highest?

A) With the inclusion of screening on SDG 12.3.
B) Without the inclusion of screening on SDG 12.3.
C) The return is equally high.
D) I do not know.

When do you think the riskiness of the investment would be the highest?

A) With the inclusion of screening on SDG 12.3.
B) Without the inclusion of screening on SDG 12.3.
C) The risk is equally high.
D) I do not know.

After determining their impression of return and risk of the investment, the participants where then asked whether they would be willing to implement a screening on SDG 12.3. To follow up this question the willingness to give up financial returns if these companies were implementing food waste reduction measures. For this the following question has been asked:

If companies that have food waste reduction measures in place would result in lower return, would you still consider investing in these companies?

A) Yes.
B) No.
C) I do not know.

To measure whether SDG 12.3, given it having a large financial potential, would be deemed more important than SDGs in general, the same questions regarding risk, return and have been asked. Additionally, the question as demonstrated by Bauer et al. (2021) regarding the specific screening on the different factors that could be a reason to exclude companies have been asked.

3.5 Background questions regarding socio-demographic and altruism

The last part of the survey has been devoted to gaining socio-demographic information regarding the participants. As there are multiple studies that suggest difference in attitude towards sustainable investing (Bauer et al, 2020; Nilsson, 2009; Cheah et al., YEAR). As they depicted that less wealthy, higher educated

women are more likely to invest into SRI, it would be interesting to see whether this premise still holds. Especially as the survey has been sent separately to wealthy investors and the average population. Additionally, the amount of years investing has been asked to determine their knowledge in investing in general. Lastly, the question regarding altruism has been asked which has been demonstrated by Bauer et al. (2020) which determines their willingness to give money to charities without expecting any return.

Chapter 4: Data Analysis and Results

The survey showed that 58 per cent (72) of the respondents chose that they would be willing to implement a screening on SDG12.3 on their potential investments (see Appendix 2: Table 1). This was nearly two thirds (64 per cent) for the wealthy investors and 55 per cent for the non-wealthy investors. For the wealthy investors 23 per cent percent of the investors chose to not screen on SDG12.3 and 21 per cent of the non-wealthy investors. To put this in perspective, 2.4 times as many investors are in favour of screening on SDG12.3 than those who are against it.

Result 1: 58 per cent of the respondents show that they are in favour of screening on SDG12.3.

This could be explained by multiple factors. As stated, before in the literature study, the choice to invest is based on the expectation of return as well on personal value. Firstly, the investor could be choosing the investment due to their affinity with food waste reduction measure as investors are known to align their own values and preferences and have the need to do so when choosing investments. Secondly, investors could choose these investments because they expect that choosing a more sustainable investment could mean that there is more return as a higher return would be the preferred option. Lastly, investors could believe that the risk of the more sustainable investment is lower than that of a conventional investment, making it a safer investment option.

4.1 Financial return and risk expectations of investors

In this section, I show the perception of investors regarding their beliefs of return and risk when investing in companies that implement food waste reduction measures with their company. When looking at conventional investments, one would argue that only the true return on investment would be taken into account; However, as investing in SDG's also has a return besides pure financially returns, these should be taken into consideration as well when trying to determine the perception of the investor. In order to determine the precepted risk and return of investing in companies that apply food waste reductions measures within their

companies, I followed the research of Bauer et al. (2021) and thus did not specifically ask for absolute benefits or costs of sustainable investing. Therefore, following their example, I did not assume a certain financial performance, but I opted to ask them directly what their financial return expectations was by asking the following questions: When do you think the investment return would be the highest? for which the distribution of can be seen in figure 1.

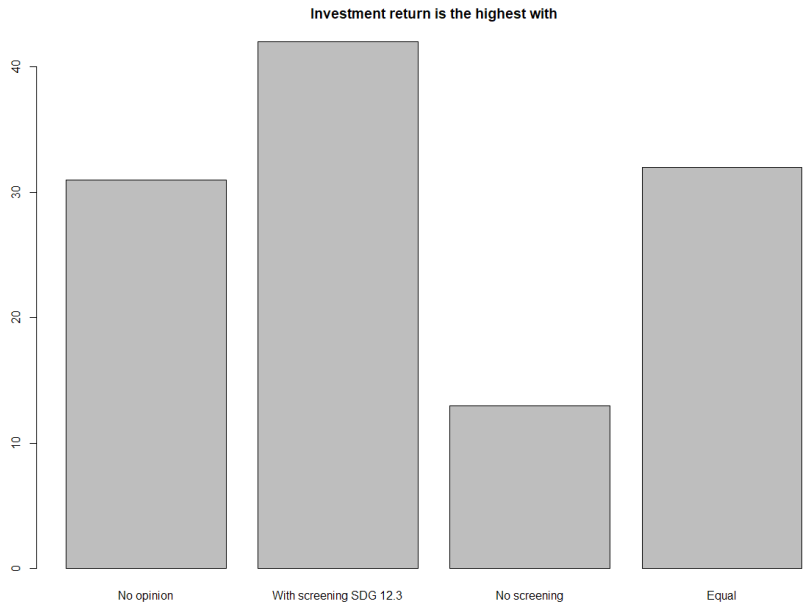

Figure 1: The graph above shows the distribution of choices for the following question: "When do you think the investment return would be the highest"? "With the inclusion of screening of SDG 12.3"; "Without the inclusion of screening on SDG12.3."; "The return is equally high."; "I do not know." SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030.

When examining this graph, one can see that the most chosen option of the respondents is that the screening of investments on SDG12.3 would create higher financial returns. However, as it is not the majority, only 36 per cent, of the investors, I cannot conclude that this is the main driving factor behind choosing to screen on SDG12.3

Result 2: Most of the respondent belief that screening on SDG12.3 would result in higher financial returns.

Besides expected returns, one should also take into account the risk perceptiveness of the investment. As Sharpe (1964) and Friedmann (1948) have found that the main driver for choosing investments for pure financial reasons are returns and expectations. The same premise as before has been used and therefore not specifically asked towards absolute numbers but asked directly when they believed that the riskiness was highest. The results for this question can be seen in figure 2:

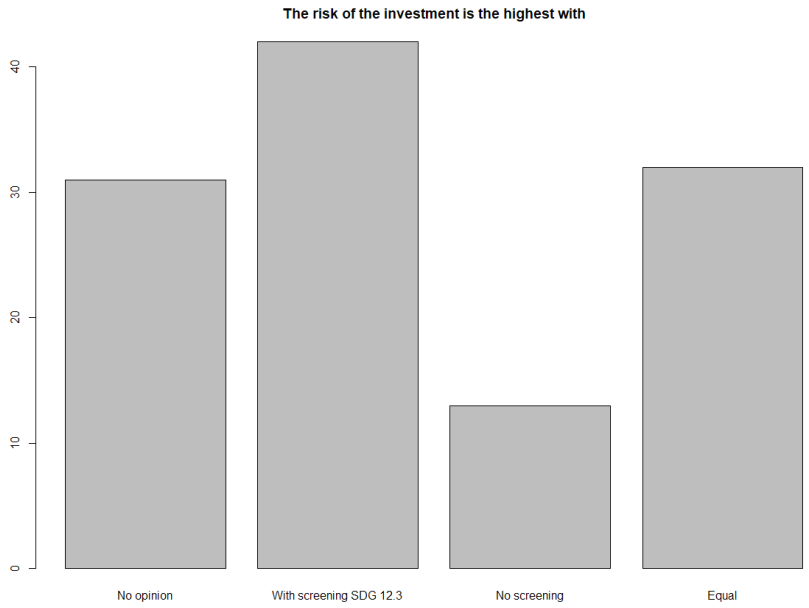

Figure 2: The graph above shows the distribution of choices for the following question: "When do you think the riskiness of the investment would be the highest"? "With the inclusion of screening of SDG 12.3"; "Without the inclusion of screening on SDG12.3."; "The return is equally high."; "I do not know." SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030.

When examining figure 2, one can conclude that the most chosen option of the investors is that the addition of screening on SDG12.3 would result in higher risk. If the result would had been that the majority of investors believe that the screening on SDG12.3 would reduce financial risk one could assume this as the driver behind their choice.

Result 3: Most of the respondent believe that screening on SDG12.3 results in higher risk.

However, as there is no clear majority, I cannot make an assumption that this drives the choice. Taking this into account, there is no clear evidence that screening on SDG12.3, meaning, sustainable investments are seen as a higher return and lower risk investments, free lunch.

To investigate this further, a multinomial logit regression, which can be seen in Table A1, has been conducted to find evidence of investors choosing to invest is influenced by their beliefs of risk and return. When conduction the regression. The demographical factors of professional, gender, age, education and wealth have been taken into account. The dependent variable takes on the three choices of the "Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?"; thus, "Yes", "No", "I do not know". The table shows the relative-risk ratios, to interpret these ratios one can consider the effect of *gender (female)* on the choice of screening on SDG12.3. A coefficient larger than 1 indicates that women are more likely to screen on SDG12.3. Likewise, a coefficient smaller than 1 indicates that women are less likely to screen on SDG12.3.

The first column of specification (1) shows the effect of the belief of financial return of SDG12.3 on the likelihood of choosing to screen on SDG12.3. It shows that investors that believe SDG12.3 has higher returns are 833 per cent more likely to choose to screen on SDG12.3. Given that 36 per cent of our sample believe that SDG12.3 has higher returns and 58 per cent of the respondents chose to screen on SDG12.3. Interestingly, expecting lower returns does not significantly decrease the choice on screening for SDG12.3. Additionally, there is no significant effect on *I do not know*. Table A2 shows the effect without control variables for demographics, here the same effect as Table A1 is found. The first column of specification (1) shows the effect of the belief of financial return of SDG12.3 on the likelihood of choosing to screen on SDG12.3. It shows that investors that believe SDG12.3 has higher returns are 618 per cent more likely to choose to screen on SDG12.3. As the effect with the control variables was even higher it shows even more the importance of higher financial return expectations.

Result 4: The expectation of higher financial return of screening on SDG12.3 significantly increases the likelihood to screen on SDG12.3

Specification (2) shows the effect of risk perception of screening on SDG12.3 on the likelihood of choosing to screen on SDG12.3. Here, there is no significant result, this shows that risk perception does not influence the choice of screening on SDG12.3. Same goes for Table A2 when specification (2) shows the effect of risk perception of screening on SDG12.3 on the likelihood of choosing to screen on SDG12.3. Here, there is no significant result, this shows that risk perception does not significantly influence the choice of screening on SDG12.3. Therefore, I can conclude that the expectation of risk does not significantly influence the choice of screening on SDG12.3.

Result 5: The expectation of risk does not influence the choice of screening on SDG12.3

4.2 The preferences and believes of the investor regarding SDG 12.3.

This section investigates whether the belief of investors regarding the value they award to SDG12.3 has an effect on implementing screening on SDG12.3 when selecting investments. For this, I asked the investors the question “How do you as an investor deem the importance of food waste reduction measures by companies.” With the following answers: “High”, “Medium”, “Low”, “Indifferent”, “I do not know”. Below in figure 3 one can see the distribution of choices regarding the value given to food waste reduction measure implementation by companies.

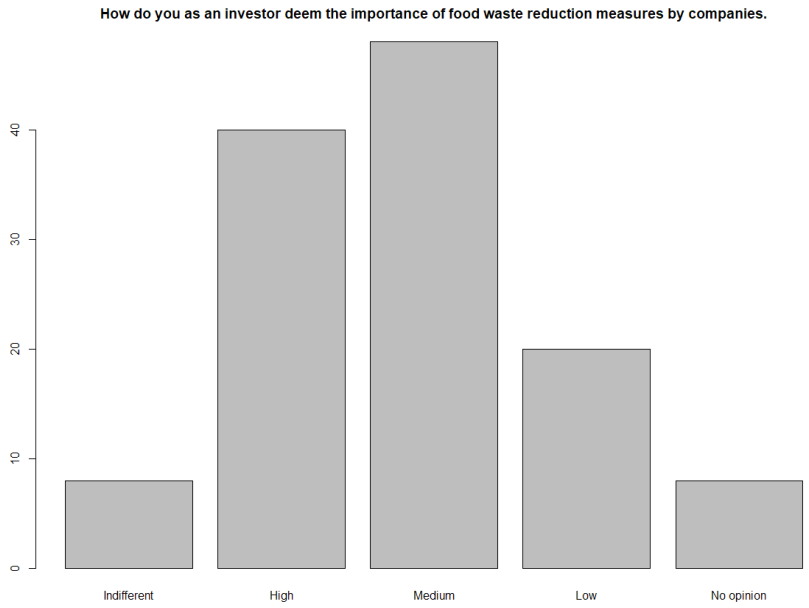

Figure 2: The graph above shows the distribution of choices for the following question: How do you as an investor deem the importance of food waste reduction measures by companies." With the following answers: "High", "Medium", "Low", "Indifferent", "I do not know".

One can see that the majority of the investors chose between medium (41,3 per cent) and high (34,5 per cent) making that 75,8 per cent of the investors deem the presence of food waste reduction important. Besides that, only 17,2 per cent of the investors deem the importance of food waste reduction measures as not important, low. To put this in perspective, 4,4 times as many investors deem the presence of food waste reduction companies medium to highly important compared to investors that find it not important.

In order to strengthen this premise, I conducted a multinomial logistic regression on the likelihood of choosing to screen on SDG12.3 when deeming food waste as important. When looking at the specification (1), we can see that when investors deem food waste reduction as important, they are 87.5 times more likely to implement screening on SDG12.3. Additionally, when adding controlling variables for demographics, specification (2), the likelihood increased from 87.5 to 99.3 times more likely to opt for implementation of screening on SDG12.3. Making the personal value of food waste reduction a highly important driver between the choice of screening.

Result 6: 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when having food waste reduction as one of their personal values.

4.3 Social preferences when choosing to screen on SDG12.3

This section investigates whether the reason for choosing to screen on SDG12.3 is driven by social preferences of the investor, and thus not solely driven by financial returns. For this I measured social

preferences through the measure of Falk et al. (2016) as cited by Bauer et al. (2021): "How willing are you to give to god causes without expecting anything in return?" Participants then rate their agreement on a 10-point Likert scale (1= completely unwilling, 10= very unwilling). The higher the rating achieved, the higher their level of social preferences is. With this I investigate the importance of social preferences when choosing to screen on SDG12.3. In Table C the relative-risk ratios of a multinomial regression that regress the choices to screen on SDG12.3, "Yes", "No", "I do not know". As the reference, I took "No"; thus, the choice not to screen on SDG12.3. I elicit social preference with the standardized results from the response on the Likert scale.

In the first column, specification (1), the relative-risk ratios are shown of the effect of social preference on the choice to implement screening on the implementation of SDG12.3 by companies. For this the results from the social preferences have been standardized. This means that a 1 standard deviation increase means an 80,1 per cent increase in likelihood to opt for the screening on the implementation of SDG12.3 by companies. In the second column, specification (2), I control for professional, gender, education, age and wealth have been added. Here the effect of social preference becomes even more prevalent with a 91,3 per cent likelihood to opt for implementation of screening on SDG12.3.

Result 7**:** Social preferences strongly predict the likelihood to op for screening on SDG12.3.

Also, interesting to note is that women are nearly 5 times as likely to opt for the implementation of screening on SDG12.3 compared to men. The average level of my sample is 6.84 (for statistics see Appendix 2: Table 1). With men having a mean of 6.68 and women a mean of 7.27.

Result 8: Women are nearly 5 times as likely to implement screening on SDG12.3 when selecting investments.

Table A1

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question "Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?". Yes, No; I do not know. SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030. For summary statistics see appendix 2: Table 1. I elicit *Financial beliefs* with the question "When do you think the investment return would be the highest?" With the inclusion of screening on SDG12.3; Without the inclusion of screening on SDG12.3; The return is equally high; I do not know. I elicit *Riskiness I highest with* the question "When do you think the riskiness of the investment would be the highest?" With the inclusion of screening on SDG12.3; Without the inclusion of screening on SDG12.3; The return is equally high; I do not know. *** p < .01; ** p < .05; * p < .1.

	Choice to screen on SDG12.3:			
	(1)		(2)	
	Yes	No opinion	Yes	No opinion
Return is highest with				
With screening SDG 12.3	9.333**	1.452		
	(0.901)	(1.045)		
No screening	0.515	0.293		
	(0.864)	(0.973)		
Equal	0.976	0.212*		
	(0.657)	(0.870)		
Riskiness is highest with				
With screening SDG 12.3			1.491	0.282
			(0.914)	(1.158)
No screening			2.425	0.750
			(0.774)	(0.910)
Equal			0.942	0.162*
			(0.704)	(0.932)
Demographics				
Professional	1.064	1.701	1.002	1.467
	(0.618)	(0.777)	(0.580)	(0.777)
Female	3.971*	3.720	3.829*	3.258
	(0.808)	(0.944)	(0.745)	(0.910)
Age	0.007	0.001	0.167	0.001
	(4.310)	(5.484)	(3.881)	(5.410)
Education	1.203	2.124	1.387	2.895
	(0.272)	(0.557)	(0.267)	(0.666)
Wealth	1.084	0.622	1.114	0.717
	(0.633)	(0.819)	(0.603)	(0.821)
Constant	0.732	0.448	1.104	0.516
	(0.805)	(0.960)	(0.836)	(1.013)
Akaike Inf. Crit.	212.331	212.331	223.988	223.988

Note: *p**p***p<0.01

Table A2

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question "Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?". Yes, No; I do not know. SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030. For summary statistics see appendix 2: Table 1. I elicit *Financial beliefs* with the question "When do you think the investment return would be the highest?" With the inclusion of screening on SDG12.3; Without the inclusion of screening on SDG12.3; The return is equally high; I do not know. I elicit *Riskiness I highest with* the question "When do you think the riskiness of the investment would be the highest?" With the inclusion of screening on SDG12.3; Without the inclusion of screening on SDG12.3; The return is equally high; I do not know. *** p < .01; ** p < .05; * p < .1.

	Dependent variable:			
	(1)		(2)	
	Yes	No opinion	Yes	No opinion
Financial beliefs				
With screening SDG 12.3	7.181***	1.067		
	(0.751)	(0.899)		
No screening	0.615	0.480		
	(0.776)	(0.871)		
Equal	0.821	0.267*		
	(0.590)	(0.747)		
Risk perception				
With screening SDG 12.3			2.182	0.500
			(0.821)	(1.061)
No screening			2.545	0.875
			(0.678)	(0.775)
Equal			0.755	0.231*
			(0.625)	(0.787)
Constant	1.625	1.250	1.833	1.333
	(0.449)	(0.474)	(0.508)	(0.540)
Akaike Inf. Crit.	220.568	220.568	232.953	232.953
Note:				*p**p***p<0.01

Table B

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question "Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?". Yes, No; I do not know. SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030. For summary statistics see appendix 2: Table 1. I elicit *Importance* with the question "How do you as an investor deem the importance of food waste reduction measures by companies.? "High"; "Medium"; "Low"; "Indifferent"; "No opinion". *** p < .01; ** p < .05; * p < .1.

	Dependent variable:			
	(1)		(2)	
	Yes	No opinion	Yes	No opinion
Importance				
High	87.504***	3.750	99.341***	10.663
	(1.315)	(1.238)	(1.443)	(1.578)
Medium	15.556**	3.055	18.738**	7.622
	(1.161)	(0.950)	(1.233)	(1.293)
Low	2.083	0.625	2.204	1.043
	(1.218)	(1.057)	(1.277)	(1.374)
No opinion	15.001*	10.000*	18.336*	21.133*
	(1.592)	(1.396)	(1.742)	(1.793)
Demographics				
Professional			1.401	2.113
			(0.692)	(0.836)
Female			5.870*	6.446*
			(0.931)	(1.065)
Age			0.001	0.0002
			(4.928)	(6.138)
Education			1.269	2.750
			(0.288)	(0.686)
Wealth			0.681	0.438
			(0.730)	(0.876)
Constant	0.200	0.400	0.068*	0.046*
	(1.095)	(0.837)	(1.450)	(1.587)
Akaike Inf. Crit.	217.098	217.098	203.304	203.304
Note:				*p**p***p<0.01

Table C

This table presents relative-risk ratios of a multinomial logit regression. The dependent variable is based on the outcome of the question "Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?". Yes, No; I do not know. SDG12.3 encompasses the goal of The United Nation's Sustainable Development goal to reduce food waste by 50 per cent before the year 2030. For summary statistics see appendix 2: Table 1. I elicit *social preference* with the standardized results from the response on the 10-point Likert scale (1 completely unwilling to 10 completely willing). *** p < .01; ** p < .05; * p < .1.

	Dependent variable:			
	(1)		(2)	
	Yes	No opinion	Yes	No opinion
Preferences				
Social Preference	1.801**	0.925	1.913**	1.097
	(0.244)	(0.274)	(0.272)	(0.306)
Demographics				
Professional			0.955	1.310
			(0.590)	(0.756)
Female			4.978**	4.937*
			(0.764)	(0.906)
Age			0.010	0.002
			(3.957)	(5.348)
Education			1.367	2.334
			(0.253)	(0.561)
Wealth			0.763	0.624
			(0.603)	(0.778)
Constant	2.640***	0.748	1.379	0.294
	(0.240)	(0.314)	(0.640)	(0.872)
Akaike Inf. Crit.	215.013	215.013	213.727	213.727
Note:				*p**p***p<0.01

4.4 discussion of hypotheses

H1 A (B): Professional investors associate the implementation of food waste reduction measures by companies with lower (higher) returns than their clients. (Rejected) For hypothesis 1(B), the regression did not show any signs that the professional investor favours implementation of food was reduction over the returns of the company. Thus, there has been found no proof regarding this. More importantly, form the descriptive statistics in Appendix 2: Table 1, it can be seen that only 8 per cent of the professional state that they expect lower returns than conventional and 38 per cent state that they expect higher returns with 30 per cent stating they expect equal returns. Where of the private investors, their clients, 35 per cent stated that they expected higher returns with screening where only 12 per cent expected higher returns with conventional investments with 26 per cent expecting equal results. So even though, only a small percentage of the professionals expect higher returns without the implementation of food waste reduction measures, I did not find proof for this hypothesis.

H2 A (B): Professional investors deem food waste reduction measures as more (less) important than financial returns than their clients. (Rejected) For hypothesis 2 (A) and (B) given that I did not find any relation between the choice of choosing to implement screening on SDG12.3 and the variable *Professional* there were no differences between client and professional on these matters. They both value food waste reduction measures equally. Concluding, I did not find proof for hypotheses 2 (A) and (B) thus will reject both hypotheses.

H3 A (B): When investors value food waste reduction measures high (low), they are more inclined to implement screening on SDG12.3. (Accepted) From the results I found that 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when having food waste reduction as one of their personal values. This shows clear evidence that when investors value food waste reduction measures higher, they op to implement screening on SDG12.3. Therefore, we accept H3 A and reject H3 (B).

H4 A (B): Investors that associate food waste reduction measures with higher (lower) returns, are more (less) likely to invest in companies that have food waste reduction measures in place. (Accepted) The results show that investors that believe SDG12.3 has higher returns are 618 per cent more likely to choose to screen on SDG12.3. And when taking into account control variables the results show that investors that believe SDG12.3 has higher returns are 833 per cent more likely to choose to screen on SDG12.3. Thus, making them more likely to invest into companies that implement food waste reduction measures. Thus, we accept H4 A and reject H4 B.

H5 A (B): Investors are more (less) likely to invest in firms that have food waste measures in place. Results showed that 58 per cent of the respondents show that they are in favour of screening on SDG12.3. Thus, we accept H 5 A and reject H5 (B).

Chapter 5: Discussion

This section of the thesis will go through the results depicted chapter 4 and will discuss whether these findings are in line with the literature on these topics. The first result of the survey is that 58 per cent of the respondents show that they are in favour of screening on SDG12.3. When comparing this to earlier studies of Bauer et al. (2021), they found similar results regarding sustainable investments.

Most of the respondent's belief that screening on SDG12.3 would result in higher financial returns. When looking at the literature for sustainable responsible investments the results are conflicting. Some say that ESG screened outperform conventional investments (Statman & Glushkov 2009; Nofsinger & Varma, 2014; Derwall et al., 2005; Edmans, 2011). Other researchers have shown that sustainable responsible investments underperform conventional investments (Riedl & Smeets, 2017; Hong & Kacperczyk, 2009; Hartzmark & Sussman 2019). However, in these situations it wasn't taking into account what the investors themselves believe what the investments would do. So even though there are conflicting results regarding investment return and sustainable responsible investments, the respondents of this study believe that a screening on SDG12.3 would increase returns. Other state that they expect investors, when expecting higher returns, would then be higher risk-adjusted returns on sustainable investments (Bauer & Smeets, 2015; Hartzmark & Sussman 2019).

This links to the second finding in which most of the respondent believe that screening on SDG12.3 results in higher risk. This premise is not in line with what the literature says on the premise of risk perception of sustainable responsible investments. Risk perception is normally regarded to be lower in companies that exercise good corporate social responsibility, and on the contrary investments that score less on the premise of good corporate social responsibility are carrying more risk (Nofsinger & Varma, 2014; Godfrey et al., 2009). Taking this result regarding risk and combining this with the willingness of applying a screening of SDG12.3 which 58 per cent of my respondents noted, it becomes interesting that one could argue that they would be willing to bear more risk when investing in companies that apply sustainable responsible investments. Combining this with the results of the regression where there were no clear indicators of difference in the choice to not implement screening when the risk is higher of not wanting to apply a screening. More importantly, one can even see, even though not significant, a relative risk-ratio of above 1 thus implying a willingness to implement screening even when risk is higher. Thus, showing a possible risk bearing willingness while selecting investments combined with screening on SDG12.3.

The expectation of higher financial return of screening on SDG12.3 significantly increases the likelihood to screen on SDG12.3. As expected, when the personal belief of investors comes into play regarding return the likelihood of investing goes up. This is shown strongly the need for investors to align their own ideas with the way they invest as discussed by Nilsson (2009) and Webley at all. (2001). One could however

argue that the investors who chose that they would be more likely to screen on SDG12.3 are merely expecting a free lunch. However, when we combine this with the finding that investors expect a higher risk, this idea is not prevalent.

In terms of perception of importance, 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when having food waste reduction as one of their personal values. This fully ties into the premise as mentioned before from Nilsson et al. (2009) and Webley et al. (2001). Additionally, this is in line with the finding of Bauer et al. (2021) who found that social predict the choice to increase 3 to 4 SDG for screening investments. Where my study found the exact same premise and show that social preferences strongly predict the likelihood to op for screening on SDG12.3. As I found that a 1 standard deviation increase means an 80,1 per cent increase in likelihood to opt for the screening on the implementation of SDG12.3 by companies.

It is interesting to note that women are nearly 5 times as likely to implement screening on SDG12.3 when selecting investments. The premise that women are more in favour of socially responsible investments is not an unexpected result when taking into account the previous research that has shown that well educated and less wealthy woman are more likely to invest in SRI (Beal et al., 2005; Cheah et al., 2011; Haigh, 2008; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish et al, 2012)

Lastly it is noteworthy that wealth, when comparing the normal population to the wealthy populations, millionaires, do not differ in terms of choice when choosing to opt for screening on SDG12.3. As one had followed the research of Smeets et al. (2015) on the giving behaviours of millionaires, one would had expected that the effect of being wealthy had a larger influence on this choice.

Chapter 6: Conclusion

The United Nations sustainable development goals (SDG) have been created as a blueprint in 2015 for targets to be reached before 2030. In order to determine whether investors favour the implementation of screening on SDG12.3, I conducted a survey under professional investors and their clients. This survey is created to create insight into the beliefs and preferences of the professional investor versus the client regarding sustainable measure when selecting investment opportunities. In this study it is found that 58 per cent of the respondents show that they are in favour of screening on SDG12.3.

This was not fully expected as I hypothesized that professional investors would associate screening on SDG12.3 would result in lower returns. However, the regression did not show any signs that the professional investor favours implementation of food was reduction over the returns of the company. More importantly, form the descriptive statistics in Appendix 2: Table 1, it can be seen that only 8 per cent of the professional state that they expect lower returns than conventional and 38 per cent state that they expect higher returns with 30 per cent stating they expect equal returns. Where of the private investors, their clients, 35 per cent stated that they expected higher returns with screening where only 12 per cent expected higher returns with conventional investments with 26 per cent expecting equal results. So even though, only a small percentage of the professionals expect higher returns without the implementation of food waste reduction measures. The premise that professional investors deem the implementation on food waste reduction measures higher or lower than their clients does not hold. There was no evidence found that there was a difference between the professional investor and the private investors regarding beliefs on returns. For both private as well as professional investors most of them stated that they believe that the implementation of screening on SDG12.3 increases the financial returns.

Interestingly, even though most of the respondents associate the screening on SDG12.3 with increased risk. From the result it showed that the most chosen option of the investors is that the addition of screening on SDG12.3 would result in higher risk. If the result would had been that the majority of investors believe that the screening on SDG12.3 would reduce financial risk one could assume this as the driver behind their choice. However, the multinominal logit regression on the implementation of screening on SDG12.3 combined with the perception of risk did not show any results. As there is no significant result, this shows that risk perception does not significantly influence the choice of screening on SDG12.3. Therefore, I can conclude that the expectation of risk does not significantly influence the choice of screening on SDG12.3.

Additionally, I Found that the expectation of financial returns significantly increases the likelihood of implementing a screening on SDG12.3. The results showed that investors that believe SDG12.3 has higher returns are 833 per cent more likely to choose to screen on SDG12.3. Given that 36 per cent of our sample believe that SDG12.3 has higher returns and 58 per cent of the respondents chose to screen on SDG12.3.

Interestingly, expecting lower returns does not significantly decrease the choice on screening for SDG12.3. Confirming the idea that investors are willing to give up returns in order to align investments with their own ideas.

Besides that, I found that investors have the very strong need to align the investment with their own ideas and beliefs. This premise, which has been found by previous researchers has once again been concluded. From the results it came forward that 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when seeing food waste reduction measures implementation by companies highly important. This shows the importance of the alignment of the vision of clients with their portfolio managers. As previous research discussed in this paper also mentioned that the alignment of interests between investor and client could be one of the main drivers behind the dampening of sustainable investments of investors.

To strengthen this premise even more, this research also showed that investors that have stronger social preferences, which has been researched through testing the willingness of investors to give money to charities without expecting any returns, are more likely to opt for a screening on SDG12.3. The result derived from the relative-risk ratios on the effect of social preference regarding the choice to implement screening on the implementation of SDG12.3 by companies demonstrated that a 1 standard deviation increase means an 80,1 per cent increase in likelihood to opt for the screening on the implementation of SDG12.3 by companies. After controlling for professional, gender, education, age and wealth have been added. Here the effect of social preference becomes even more prevalent with a 91,3 per cent likelihood to opt for implementation of screening on SDG12.3.

Lastly, the results showed that women are nearly 5 times as likely to implement screening on SDG12.3 compared to men when selecting investments. This premise which has also been shown by multiple other researches is important to take into account for the literature as it shows how strongly the presence of women within data sets can skew the results towards more favourable outcome of sustainable responsible investments.

However, as my dataset was predominantly male and not female, the importance of food waste reduction measures comes through even more.

This paper does not only add in terms of literature, but it also contributes strongly to the field of investing and the way a mediator should chose to interact with their clients. As shown in the results, 58 per cent of all respondents showed that they were in favour of implementing a screening of SDG12.3, this combined with the outcome investors expect higher financial return when screening on SDG12.3 shows that food waste reduction has become a more important aspect to consider. Therefore, mediators should take into consideration creating a tool in which they can screen investments on food waste reduction measures.

additionally, as it has shown that the perception of risk does not influence the choice to integrate a screening on SDG12.3, combined with the expectation of the respondents that the screening on SDG12.3

would impose more risk on the investment shows that the risk-bearing willingness of investors when selecting investments that are implementing food waste reduction measures is higher than those of conventional investments. This interlinks with the finding that investors have the need to align investments with their own personal values. This brings the question how mediators should go about finding out the preferences and beliefs of their own clients. These personal values should not be underestimated by the mediators of the portfolios of clients. As this paper has shown that investors are 99.3 times more likely to choose screening on SDG12.3 as these align with their own perception of importance.

These premises do not only hold for the mediator side of the investments, also the receiving party, the company, should take into consideration the findings of this study. As it shows that investors greatly appreciate the presence of food waste reduction measures, 75,8 per cent stated they found food waste reduction measures medium to highly important. These companies could for that matter try to implement such measures to in the end attract more investors and potentially benefit from the increased flow of capital.

As any study, this study is not free from limitations. First, being that the research has primarily been conducted in The Netherlands, which is a country known for its relatively large share of assets invested sustainably. Eurosif (2018) and U.S. SIF (2018) stated that the amount of assets under management invested sustainably were around €2.8 trillion in the Netherlands and €12 trillion in the United states. This when taking into account that the Netherlands has merely 17 million inhabitants compared to the United States with 327 million, one can see that there the presence of sustainable investments in the Netherlands is considerably larger in relative terms compared to the United States. With the second limitation where all the millionaire respondents where clients of the same firm. This could, provide a bias towards sustainability if the company in question would promote sustainable investing. Therefore, these cultural differences should be taken into consideration when considering the results of this study.

Therefore, future studies could investigate this study in other European countries as well as American, Asian, African and Oceanic countries to determine whether the premises in this study still hold when taking into account different cultures. Additionally, this research could also be delimited from the sole premise of food waste reduction measures. One could also explore other fields of SDG, or potentially rank the different SDGs on scale of importance for investors. This could contribute even more towards the managing and receiver end of investments in terms of considerations when choosing sustainability measures.

Lastly, outside the field of investments, decision makers that are making decisions on behalf of other could take these findings into consideration. For example, individuals that are trying to reach a larger audience could use this premise to create a larger target group for public support being aligned with food waste reduction measures.

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Appendices

Appendix 1: Survey SDG 12.3

Introduction

Dear participant, this survey will take approximately 5 minutes. The research is conducted to create an insight into the beliefs of investors regarding sustainable investments with a focus on food waste reduction measures. The key reason for the interest is related to the fact that food waste has become more and more prevalent. The United Nations (UN) has placed food waste on their sustainable development goals under target 12.3, which aims to reduce food waste by 50 per cent by the end of 2030. The UN has estimated that each year the cost of food loss and waste to be up to $940 billion per annum (UN news centre, 2016). All the answers given in this survey will be handled with the greatest care and will be used for research purposes only and won't be shared with third parties. If you have any questions about the questionnaire you can contact via: hf.dehoop@student.maastrichtuniversity.nl

Q0(A) - Are you a private/professional investor?

D) Private
E) Professional
F) I do not know.

Q0(B1) Are you familiar with the environment, social governance factors?

C) Yes
D) No

Info slide ESG:

ESG refers to environment, social governance, these are three factors that are being used to determine the sustainability and societal impact of a company or an investment. For more information on ESG you can visit the following website of the European Union:

Q0(B2)- Do you take the ESG criteria into consideration when selecting investments?

D) Yes
E) No
F) I do not know.

Q0(C1) Are you familiar with corporate social responsibility factors?

A) Yes
B) No

Info slide CSR

CSR refers to corporate social responsibility are factors which companies use to self-regulate their impact on the environment they operate in. The purpose is to give back to the community and provide positive social value through participating in philanthropic causes and ensuring the wellbeing of their employees. For more information on CSR, you can visit the following website of the European Union:

Q0(C2)- Do you as an investor take in to account the CSR when considering potential investments?

A) Yes

B) No

C) I do not know.

Q1(1) Are you familiar with the United Nation's Sustainable Development Goals?

A) Yes

B) No

Intro SDG

The United Nations sustainable development goals (SDG) have been created as a blueprint in 2015 for targets to be reached before 2030. This survey is created to create insight into the beliefs and preferences of the professional investor versus the client regarding sustainable measure when selecting investment opportunities. The goal for this survey in particular is SDG 12.3, the aim is to reduce food waste by 50 per cent. For more information on SDG 12.3 you can visit the following website of the UN.

Q1(2) - How do you as an investor deem the importance of food waste reduction measures by companies.

F) High

G) Medium

H) Low

I) Indifferent

J) I do not know.

Q2 - Would you as an investor be willing to implement a screening on SDG 12.3, food waste reduction, as part of your investment selection process?

A) Yes.

B) No.

C) I do not know.

Q3(1) -When do you think the investment return would be the highest?

E) With the inclusion of screening on SDG 12.3.

F) Without the inclusion of screening on SDG 12.3.

G) The return is equally high.

H) I do not know.

Q3(2) -When do you think the riskiness of the investment would be the highest?

E) With the inclusion of screening on SDG 12.3.

F) Without the inclusion of screening on SDG 12.3.

G) The risk is equally high.

H) I do not know.

Q4 - If companies that have food waste reduction measures in place would result in lower return, would you still consider investing in these companies?

D) Yes.

E) No.

F) I do not know.

Q5 – Do you currently exclude companies when selecting potential investments based on The United Nation’s Sustainable Development Goals?

A) Yes.

B) No.

Q6 - if yes, on which of the following factors would you exclude companies (multiple answers possible)?

Companies that...

A) Produce tobacco.

B) Produce controversial weapons such as cluster bombs and landmines.

C) Produce alcohol.

D) Produce weapons (other than controversial weapons).

E) Infringe on human rights.

F) Use forced labour.

G) Have a negative impact on the environment.

H) Are involved in corruption, extortion or bribery.

I) Allow child labour.

Q7 - How do you as an investor deem the importance of the implementation of The United Nations Sustainable Development Goals by companies.

A) High

B) Medium

C) Low

D) Indifferent

E) I do not know.

Q8 - When do you think the investment return would be the highest (SDG inclusion in general)?

A) With the inclusion of screening on SDG.

B) Without the inclusion of screening on SDG.

C) The return is equally high.

D) I do not know.

Q9 - When do you think the riskiness of the investment would be the highest (SDG inclusion in general)?

A) With the inclusion of screening on SDG.

B) Without the inclusion of screening on SDG.

C) The return is equally high.

D) I do not know.

I would also like to ask you some background questions.

Altruism question

Q10- How willing are you to give to good causes without expecting anything in return?

completely unwilling 1→10 very willing

Background questions

Q11 - I am...

A) Male

B) Female

C) Other

Q12 - In what year were you born?

Year of birth: ____

Q13 - How long have you been investing into companies?

A) 0-1 year.

B) 1-5 years.

C) 5-10 years.

D) 10-15 years.

E) 15+ years.

F) Other:.. years.

Q14 - What is the highest level of education you have completed?

A) Preparatory secondary vocational education (VMBO) or lower general secondary education
B) (MAVO or MULO)
C) Higher general secondary education (HAVO)
D) Pre-university education (HBS, HAVO, VWO) or pre-university education with Latin and/or
E) Greek (Gymnasium)
F) Intermediate vocational education level 1 (MBO)
G) Intermediate vocational education level 2 (MBO)
H) Intermediate vocational education level 3 (MBO)
I) Intermediate vocational education level 4 (MBO)
J) Higher professional education (HBO)
K) University (WO)
L) Other:
M) I did not follow any of the above types of education

Appendix 2: Table 1

	Descriptive statistics			
	Total observations: 152			
	Mean	**Median**	**SD**	**Obs.**
Preferences				
Social preferences (1 –10)	6.842	7.000	2.224	114
Financial beliefs				
With screening on SDG12.3	36%			42
No screening	11%			13
Equal	27%			32
No opinion	26%			31
Risk perception				
With screening on SDG12.3	35%			41
No screening	14%			17
Equal	30%			35
No opinion	21%			25
Importance SDG12.3				
High	32%			40
Medium	39%			48
Low	16%			20
Indifferent	6%			8
No opinion	6%			8
Demographics				
Professional	28%			40
Female	26%			30
Age	40.43	40.00	14.82	110
Wealth	27%			41

Summary

Introduction

The selection process in which investors choose their investments to be more sustainable has ever been a highly researched topic (Bauer & Smeets, 2015; Beal et al., 2005; Cheah et al., 2011; Haigh et al., 2008; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish et al., 2012; Rosen et al. 1991; Schueth, 2003; Tippet, 2001). Throughout the years it has become more and more prevalent that a specific part of investments, sustainable responsible investments, SRI, has become more and more important and a fast-growing market (McKinsey, 2017). Some large institutional investors have even already started to implement ESG factors in their screening process and have been benefiting from these actions ever since. As such that the use of ESG screening now used for 50 per cent of the sustainable investment selection process (McKinsey, 2017). One could however, wonder whether the selection process of sustainable investment should be merely focused on ESG and whether there wouldn't be more concrete measures to take into account. Bauer et al. decided to take this premise and used the United Nation's Sustainable Development Goals as a proxy for determining the willingness of pension fund members to increase the current scope of SDG screening (2021).

In the past years, one measure that becomes more and more prevalent is food waste. The United Nations (UN) has placed food waste on their sustainable development goals under target 12.3, which aims to reduce food waste by 50 per cent by the end of 2030. The UN has estimated that each year the cost of food loss and waste to be up to $940 billion per annum (UN news centre, 2016). A recent study by Gunders (2020) for the Natural Resources Defence Council, has found that in the United States alone, food waste accounts for a loss of $165 billion dollar each year. This accounts for 40 per cent of the total produced food within the United States (Gunders, 2020). Some have stated that this happens mostly at the consume end, however, it has been shown that less than a third of the waste occurs at the end consumer and thus two thirds of the losses occur in the industry. The foodservice industry, with a global market value of $3,246.8 billion, thus, are wasting a large percentage of their value and consequently, hampering their financial performance (MarketLine, 2019). Therefore, it could be hypothesized that companies that would invest in food waste reduction measures would have better performance and thus be a sounder investment for potential investors. Additionally, Gomez-Bezares et al. (2016) stated the following: "firms that incorporate sustainability issues into their business operations are better able to leverage their resources toward stronger financial performance and shareholder value creation than other companies''. Once again proving the financial benefits of implementing sustainable measures within company processes.

This thesis will contribute in the form of answering the unexplored field of food waste reduction measures' effect on acquiring investments from investors. As current research mostly focusses on the driving reasoning, whether this is financial or personal, behind choosing investments with sustainability measures in

place, where this research will focus specifically on food waste reduction measure and whether this would influence investment choices. Both for the business aspect as well as the academic aspect this is an interesting contribution as it would give more insight into the mind of the investors and their specific preferences. This could be used in the business aspect to portray their strategies regarding food waste more and at the same time receive more investments. Especially given the scope of difference in preferences between the professional investor and their client. This premise has also been confirmed by Paetzold et al. that stated that advisors and mediators in their role might be an important barrier for sustainable development by limiting sustainable investments of their clients by imposing their own opinions (2015).

Problem statement

After determining the literature gap and the research scope of the paper the following problem statement has been created:

Do food waste measures influence the investment selection process of investors?

From this problem statement the following sub questions have been derived:

5. Do professional investors associate food waste reduction measures with increased financial performance of their investment portfolio differently than their clients?
6. What value do professional investors award to the premise of food waste reduction measures in comparison to their clients?
7. Do investors deem the presence of food waste reductions more important than the potential loss of returns?
8. What are potential implications for companies and fund managers regarding food waste reduction related investments?

To answer these questions, this work will gather data from the survey and combine this with existing literature regarding investment selection theory.

Literature Review and Hypotheses

With multiple researchers and academic trying their hand at determining the impact of sustainability measures on financial performance (Mollet et al., 2013; Tang et al., 2012). Within their research, they found that there are multiple angles to cover when assessing the relationship between sustainability and financial performance. One could determine the level of sustainability within a company by purely determining the number of sustainable measures that are in place while on the other hand, one could determine the sustainability by assessing the engagement by gauging the dimension of CSR covered which are inherent to the internal structure of the company (Tang et al., 2012). Most of the research, however, is focussed on the broader picture; thus, lacks the in-depth information regarding specific topics within the sustainability

spectrum. More specifically, most of the research regarding sustainability measures has focused on the financial returns.

Ethical investing, which has its roots in religions such as Judaism, Christianity and the Islam has been seen as the basis for the SRI investments one sees today (Dorfleitner & Nguyen, 2016). The development of SRI investments has been mostly sparked by the political climate of the 1960s (Renneboog et al., 2008). When looking at SRI, a given fact is that it is not arbitrary to deduct how investor choose their investments. For this the individual their personal beliefs, preferences and attitude come into play. In the past, Friedman & Savage (1948) and Sharpe (1964) have stated that individuals seek to optimize their welfare, they depicted that such optimization has been achieved through balancing risk and return to their preferences. As also has been noted by Nilsson (2008) & Brimble et al. (2013), they stated that the most influential factors for selecting investments are risk and return for both conventional as well as sustainable investments.

However, Pasewark & Riley (2010) noted that other factors such as personal values are equal in terms of decision drives to risk and return. Thus, including non-monetary value and ethical objectives as investment goals. This theorem has also been strengthened by research from Pèrez-Gladish (2012) who found that when seeking non-financial benefits, they are still financially aware. When taking into account these premises, the same could be said for deciding whether to screen on SDG; thus, taking into account the way the investor values an investment and balances it to their own specific need. in This raises the question what value an investor gives to their investments and thus how he or she makes their decisions.

A common misconception of SRI is that it is considered charity as investments imply gaining a future benefit for something you are willingly giving up today (Nilsson, 2009). As investors can thus be seen as profit seeking and not as merely giving their money away. This, however, does not mean that investors investing in SRI are not willing to give up revenue. Webley et al. (2001) found further evidence that investors, who are investing ethically, have the need to invest in companies that are aligned with their personal values. They found that these types of investors are strongly committed to their investments and are even willing to give up a part of their earnings due to poor performance or ethically ineffective. Moreover, Haigh (2008) found that one in two respondents had chosen not to invest due to informational concerns, which unexpectedly was aimed towards social investment styles, portfolio listing and perceived accuracy of information whereas the management expenses of the company were deemed less important. This underlines the premise of Webley et al. (2001) stating they willingness to give up effectiveness of the company invested in.

In the previous paragraph the investment preferences of the individual investor have been described. As these factors have become more prevalent, one could only except the current trend within the investment industry, sustainable responsible investing. SRI investing has been seen as one of the faster growing segments of the past decades. This could be seen by the introduction of SRI mutual funds. These funds, which are actively screening their investments on social, environmental and ethical factors have become large players

within the mutual fund industry (Sparkes, 2010). Recent report by The Forum for Sustainable and Responsible Investment (2020) have noted that currently ever 1 in 3 dollars of assets under professional management, in The United States, are invested using SRI screening, where this was still only 1 in 9 merely a decade ago. The growth seen in the SRI investment segment once again shows the importance of gaining a more in-depth knowledge of the SRI market. From the same source it can also be seen that the food waste reduction aspect has become more prevalent in the SRI market. When looking at increases from 2018 to 2020, sustainable resources/natural resources and agriculture grew by 81 per cent. This is the fastest growing assets under management sector in the ESG criteria list. When looking at the current status of SRI Waring & Lewer (2004) stated the following: "the status of SRI has shifted from being a novelty financial product to become a major force in international equities markets".

Taking into account the current SR-investor, Nilsson (2009) stated that there are three different segments of SRI investors. He argued that there is first, the SR investors that value financial return over social responsibility, primarily concerned about profit. Second, Investors that value social responsibility over financial return, primarily concerned about social responsibility. Lastly, the social and return driven, the give equal value to both the financial aspect as well as the socially responsible aspect of the investment. When considering the demographics of these investors, it has been found that they are more likely to be single, younger, less wealthy, and better educated than non-sustainable responsible investors (Beal et al., 2005; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish, 2012; Schueth, 2003). Furthermore Cheah et al. (2011) found that younger sustainable responsible investors, with high incomes and who attained higher education levels, are expecting at least the same returns from sustainable responsible investments compared to conventional investments. On the contrary, older men are less likely to choose to screen on more SDG, thus, less likely to invest more sustainable (Bauer et al., 2005). Additionally, Junkus & Berry (2010) therefore also mentioned that there needed to be additional efforts made to convince wealthier and male investors to the merits of socially responsible investing. As this study also takes into account wealthy investors, it would be interesting to see whether this proposition still holds or that the wealthier investor has since changed his preferences.

The role of the advisor has not only been stressed by Junkus and Berry (2010); even so, by Paetzold et al. (2015). They stated that salespeople might systematically deviate from their client's interest in regards to social responsibility. This deviation from their role as mediators for their clients could be creating a barrier for investors to participate in investing ethically. Additionally, in such situations they would not be fulfilling their duties to be an objective advisor taking solely into account the preferences of their clients. Consequently, these deviations could lead to skewed capital allocation, limit the suitability of client's portfolios and depress the role of SRI in financial markets. Such phenomena could be harmful towards the success of sustainable investment products available in the market.

When investigating the food industry specifically, it has been shown that it is more susceptible to crop reduction and yield reduction external shocks than other industries. Hong et al. (2016) have found that food stocks are not correctly discounting the effect of droughts, thus external shocks, within their stocks. This results in food stock having poor profit growth in countries that experience higher drought. Therefore, they concluded that food stocks return predictability is consistent with food stock prices underreacting to climate change risk; thus, applying the same principle to food waste, one could expect a similar effect where prices underreact.

For SRI and ESG screening, one could also argue that these investments are sounder than their conventional counterparts. According to a report from Bank of America (2019) 90 per cent of the bankruptcies on the S&P 500 between 2005 and 2015 could have been avoided by screening out companies with below average environmental and social scores five years prior to the events. This premise shows that the screening based on SRI, ESG and SDG factors are vital to ensure that the investee's funds are allocated towards companies that are more likely to succeed. Therefore, it is important to obtain an understanding whether investors and their clients see merit in the possibility of screening their investments on these factors prior to investing.

Previous research does however lack in the terms of insight into the preferences and considerations that investors make before selecting funds in terms of food waste specific measures. Therefore, the objective of this master thesis is the following: to determine whether food waste reduction measures have an impact on the decision making of investors when selecting companies to invest in. I hypothesize that, given the potential benefits of including food waste reduction measures within companies, investors are more willingly to invest in companies where such measures are present.

Hypotheses

If one would follow the prior research by Riedl & Smeets (2017). One would assume that investors would associate food waste reduction measures with lower returns. As, investors generally believe that higher levels of CSR have lower abnormal returns. However, given the premise that food waste reduction measures are in general positive for financial performance, the opposite could be true for the professional investors. In addition, taking into account the recent report from Bank of America (2019) which stated 90 per cent of the bankruptcies on the S&P 500 between 2005 and 2015 could have been avoided by screening companies on ESG matters, could strengthen the hypotheses that the informed investor associates the implementation of food waste reduction measures by companies with higher results.

H1 A (B): Professional investors associate the implementation of food waste reduction measures by companies with lower (higher) returns than their clients.

The same premise has been taken regarding the research conducted by Riedl & Smeets (2017) which depicted that financial returns are not necessarily the main driving factor behind choosing investments. In addition, following the statements from Webley et al. (2001), where they found further evidence that investors,

who are investing ethically, have the need to invest in companies that are aligned with their personal values. They found that these types of investors are strongly committed to their investments and are even willing to give up a part of their earnings due to poor performance or ethically ineffective. Furthermore, Haigh (2008) argued that investors investment choice is due to informational concerns, which unexpectedly was aimed towards social investment styles, portfolio listing and perceived accuracy of information whereas the management expenses of the company were deemed less important; thus, undervaluation of financial returns. As Paetzold et al. (2015) stated, salespeople might systematically deviate from their client's interest in regard to social responsibility. This deviation from their role as mediators for their clients could be creating a barrier for investors to participate in investing ethically. Junkus & Berry (2010) therefore also mentioned that there needed to be additional efforts made to convince wealthier and male investors to the merits of socially responsible investing. As this study also takes into account wealthy investors, it would be interesting to see whether this proposition still holds or that the wealthier investor has since changed his preferences. Therefore, the expectation is that investors deem the returns as less important and could be imposing this premise on their clients.

H2 A (B): Professional investors deem food waste reduction measures as more (less) important than financial returns than their clients.

The notion is that when investors value food waste reduction measures high, they are inclined to associate firms with these measures to have higher returns. As Additionally, such deviation in order to determine this premise, the data from the survey will be analysed.

H3 A (B): When investors value food waste reduction measures high (low), they are more (less) inclined to implement screening on SDG12.3.

For hypothesis 4, the premise is that when investors associate food waste reduction measures with higher returns, they are more likely to invest in firms that employ such measures. Following the theorem of Friedman & Savage (1948) and Sharpe (1964) in which they stated that individuals seek to optimize their welfare, they depicted that such optimization has been achieved through balancing risk and return to their preferences. As also has been noted by Nilsson (2008) & Brimble et al. (2013), they stated that the most influential factors for selecting investments are risk and return for both conventional as well as sustainable investments. For this, the data from the survey will be analysed. For both hypothesis 3 and 4, a multinomial logit regression will be used as demonstrated in Bauer et al. (2020).

H4 A (B): Investors that associate food waste reduction measures with higher (lower) returns, are more (less) likely to invest in companies that have food waste reduction measures in place.

For hypothesis 5, one could hypothesize that the investors are more to invest in companies that employ food waste reductions measures as these measures have positive financial returns. This hypothesis will be answered through the data retrieved from the survey.

H5 A (B): Investors are more (less) likely to invest in firms that have food waste measures in place.

Research Design

Sample collection

This research studies whether the existence of food waste reduction measures, affect the choice of investors to invest in companies/stocks/funds. In order to determine this premise, this research uses the data from the personal network of Hilbert de Hoop, both in terms of current wealthy investors, through the investors network linked to Suite 25 as well as professional investors in the food service industry through the personal network of the researcher. The data will be collected through an online survey with the Qualtrics research suite.

Suite 25 is a family office owned by W. de Hoop-Van Dijk and K. Roeleveld. Suite 25 has a diverse clientele base with a dozen wealthy families with large investment portfolios. This has created a large network of private equity, investment banks and investment companies alike. Within this network I, the researcher, will be able to distribute my survey and therefore reach a broad sample regarding current investors.

3.2 Survey development

The Survey is designed to capture the preferences of both the professional investor(mediator) as the private investor(client) on the implementation of food waste reduction measures by companies. Former studies like Bauer et al. (2020) have asked their participants whether they wanted to add a fourth SDG into the screening process done by their pension fun. Others like (Lewis & Mackenzie, 2000; Webley et al., 2001) have tried do differentiate conventional investors from sustainable responsible investors. However, it is found that it is nearly impossible to differentiate between such investors as purely a signal of 1 sustainable fund in their portfolio does not signal that they are sustainable investors (Cheah et al. 2011). Therefore, the premise of sustainable investor versus conventional investor will be taken into account through asking them regarding whether ESG, CSR or SDG's every influenced their screening. This premise is taken from the research of Williams (2007), the Survey will first start off by investigating whether investors are already active in terms of screening their investments on these factors. With that I can add to the literature of sustainable investing in terms on new data on wealthy investors that invest through the SRI principles. Investors that do not see themselves influenced through ESG, CSR or SDG factor are thus noted as conventional investors; however, it is still interesting to see whether they would still be willing to add screening on SDG's after providing information regarding SDG. The Survey will contain 21 questions which are sorted as follows: the first part tested the knowledge and screening behaviour of the investor on ESG and CSR, the second part tested measure the preferences and believes of the investor regarding SDG 12.3 and SDGs in general, the third and final part

collected socio-demographic information and their altruistic behaviour. The full questionnaire can be found in Appendix 1.

Results

H1 A (B): Professional investors associate the implementation of food waste reduction measures by companies with lower (higher) returns than their clients. (Rejected) For hypothesis 1(B), the regression did not show any signs that the professional investor favours implementation of food was reduction over the returns of the company. Thus, there has been found no proof regarding this. More importantly, form the descriptive statistics in Appendix 2: Table 1, it can be seen that only 8 per cent of the professional state that they expect lower returns than conventional and 38 per cent state that they expect higher returns with 30 per cent stating they expect equal returns. Where of the private investors, their clients, 35 per cent stated that they expected higher returns with screening where only 12 per cent expected higher returns with conventional investments with 26 per cent expecting equal results. So even though, only a small percentage of the professionals expect higher returns without the implementation of food waste reduction measures, I did not find proof for this hypothesis.

H2 A (B): Professional investors deem food waste reduction measures as more (less) important than financial returns than their clients. (Rejected) For hypothesis 2 (A) and (B) given that I did not find any relation between the choice of choosing to implement screening on SDG12.3 and the variable *Professional* there were no differences between client and professional on these matters. They both value food waste reduction measures equally. Concluding, I did not find proof for hypotheses 2 (A) and (B) thus will reject both hypotheses.

H3 A (B): When investors value food waste reduction measures high (low), they are more inclined to implement screening on SDG12.3. (Accepted) From the results I found that 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when having food waste reduction as one of their personal values. This shows clear evidence that when investors value food waste reduction measures higher, they op to implement screening on SDG12.3. Therefore, we accept H3 A and reject H3 (B).

H4 A (B): Investors that associate food waste reduction measures with higher (lower) returns, are more (less) likely to invest in companies that have food waste reduction measures in place. (Accepted) The results show that investors that believe SDG12.3 has higher returns are 618 per cent more likely to choose to screen on SDG12.3. And when taking into account control variables the results show that investors that believe SDG12.3 has higher returns are 833 per cent more likely to choose to screen on SDG12.3. Thus, making them

more likely to invest into companies that implement food waste reduction measures. Thus, we accept H4 A and reject H4 B.

H5 A (B): Investors are more (less) likely to invest in firms that have food waste measures in place. Results showed that 58 per cent of the respondents show that they are in favour of screening on SDG12.3. Thus, we accept H 5 A and reject H5 (B).

Discussion

This section of the thesis will go through the results depicted chapter 4 and will discuss whether these findings are in line with the literature on these topics. The first result of the survey is that 58 per cent of the respondents show that they are in favour of screening on SDG12.3. When comparing this to earlier studies of Bauer et al. (2021), they found similar results regarding sustainable investments.

Most of the respondent's belief that screening on SDG12.3 would result in higher financial returns. When looking at the literature for sustainable responsible investments the results are conflicting. Some say that ESG screened outperform conventional investments (Statman & Glushkov 2009; Nofsinger & Varma, 2014; Derwall et al., 2005; Edmans, 2011). Other researchers have shown that sustainable responsible investments underperform conventional investments (Riedl & Smeets, 2017; Hong & Kacperczyk, 2009; Hartzmark & Sussman 2019). However, in these situations it wasn't taking into account what the investors themselves believe what the investments would do. So even though there are conflicting results regarding investment return and sustainable responsible investments, the respondents of this study believe that a screening on SDG12.3 would increase returns. Other state that they expect investors, when expecting higher returns, would then be higher risk-adjusted returns on sustainable investments (Bauer & Smeets, 2015; Hartzmark & Sussman 2019).

This links to the second finding in which most of the respondent believe that screening on SDG12.3 results in higher risk. This premise is not in line with what the literature says on the premise of risk perception of sustainable responsible investments. Risk perception is normally regarded to be lower in companies that exercise good corporate social responsibility, and on the contrary investments that score less on the premise of good corporate social responsibility are carrying more risk (Nofsinger & Varma, 2014; Godfrey et al., 2009). Taking this result regarding risk and combining this with the willingness of applying a screening of SDG12.3 which 58 per cent of my respondents noted, it becomes interesting that one could argue that they would be willing to bear more risk when investing in companies that apply sustainable responsible investments. Combining this with the results of the regression where there were no clear indicators of difference in the choice to not implement screening when the risk is higher of not wanting to apply a screening. More importantly, one can even see, even though not significant, a relative risk-ratio of above 1 thus implying

a willingness to implement screening even when risk is higher. Thus, showing a possible risk bearing willingness while selecting investments combined with screening on SDG12.3.

The expectation of higher financial return of screening on SDG12.3 significantly increases the likelihood to screen on SDG12.3. As expected, when the personal belief of investors comes into play regarding return the likelihood of investing goes up. This is shown strongly the need for investors to align their own ideas with the way they invest as discussed by Nilsson (2009) and Webley at all. (2001). One could however argue that the investors who chose that they would be more likely to screen on SDG12.3 are merely expecting a free lunch. However, when we combine this with the finding that investors expect a higher risk, this idea is not prevalent.

In terms of perception of importance, 75,8 per cent of the respondents deem the presence of food waste reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when having food waste reduction as one of their personal values. This fully ties into the premise as mentioned before from Nilsson et al. (2009) and Webley et al. (2001). Additionally, this is in line with the finding of Bauer et al. (2021) who found that social predict the choice to increase 3 to 4 SDG for screening investments. Where my study found the exact same premise and show that social preferences strongly predict the likelihood to op for screening on SDG12.3. As I found that a 1 standard deviation increase means an 80,1 per cent increase in likelihood to opt for the screening on the implementation of SDG12.3 by companies.

It is interesting to note that women are nearly 5 times as likely to implement screening on SDG12.3 when selecting investments. The premise that women are more in favour of socially responsible investments is not an unexpected result when taking into account the previous research that has shown that well educated and less wealthy woman are more likely to invest in SRI (Beal et al., 2005; Cheah et al., 2011; Haigh, 2008; Junkus & Berry, 2010; Nilsson, 2009; Perez-Gladish et al, 2012)

Lastly it is noteworthy that wealth, when comparing the normal population to the wealthy populations, millionaires, do not differ in terms of choice when choosing to opt for screening on SDG12.3. As one had followed the research of Smeets et al. (2015) on the giving behaviours of millionaires, one would had expected that the effect of being wealthy had a larger influence on this choice.

Conclusion

The United Nations sustainable development goals (SDG) have been created as a blueprint in 2015 for targets to be reached before 2030. In order to determine whether investors favour the implementation of screening on SDG12.3, I conducted a survey under professional investors and their clients. This survey is created to create insight into the beliefs and preferences of the professional investor versus the client regarding

sustainable measure when selecting investment opportunities. In this study it is found that 58 per cent of the respondents show that they are in favour of screening on SDG12.3.

This was not fully expected as I hypothesized that professional investors would associate screening on SDG12.3 would result in lower returns. However, the regression did not show any signs that the professional investor favours implementation of food was reduction over the returns of the company. More importantly, form the descriptive statistics in Appendix 2: Table 1, it can be seen that only 8 per cent of the professional state that they expect lower returns than conventional and 38 per cent state that they expect higher returns with 30 per cent stating they expect equal returns. Where of the private investors, their clients, 35 per cent stated that they expected higher returns with screening where only 12 per cent expected higher returns with conventional investments with 26 per cent expecting equal results. So even though, only a small percentage of the professionals expect higher returns without the implementation of food waste reduction measures. The premise that professional investors deem the implementation on food waste reduction measures higher or lower than their clients does not hold. There was no evidence found that there was a difference between the professional investor and the private investors regarding beliefs on returns. For both private as well as professional investors most of them stated that they believe that the implementation of screening on SDG12.3 increases the financial returns.

Interestingly, even though most of the respondents associate the screening on SDG12.3 with increased risk. From the result it showed that the most chosen option of the investors is that the addition of screening on SDG12.3 would result in higher risk. If the result would had been that the majority of investors believe that the screening on SDG12.3 would reduce financial risk one could assume this as the driver behind their choice. However, the multinominal logit regression on the implementation of screening on SDG12.3 combined with the perception of risk did not show any results. As there is no significant result, this shows that risk perception does not significantly influence the choice of screening on SDG12.3. Therefore, I can conclude that the expectation of risk does not significantly influence the choice of screening on SDG12.3.

Additionally, I Found that the expectation of financial returns significantly increases the likelihood of implementing a screening on SDG12.3. The results showed that investors that believe SDG12.3 has higher returns are 833 per cent more likely to choose to screen on SDG12.3. Given that 36 per cent of our sample believe that SDG12.3 has higher returns and 58 per cent of the respondents chose to screen on SDG12.3. Interestingly, expecting lower returns does not significantly decrease the choice on screening for SDG12.3. Confirming the idea that investors are willing to give up returns in order to align investments with their own ideas.

Besides that, I found that investors have the very strong need to align the investment with their own ideas and beliefs. This premise, which has been found by previous researchers has once again been concluded. From the results it came forward that 75,8 per cent of the respondents deem the presence of food waste

reduction measures as medium to highly important, strengthened by the fact that investors are 99.3 times more likely to choose screening when seeing food waste reduction measures implementation by companies highly important. This shows the importance of the alignment of the vision of clients with their portfolio managers. As previous research discussed in this paper also mentioned that the alignment of interests between investor and client could be one of the main drivers behind the dampening of sustainable investments of investors.

To strengthen this premise even more, this research also showed that investors that have stronger social preferences, which has been researched through testing the willingness of investors to give money to charities without expecting any returns, are more likely to opt for a screening on SDG12.3. The result derived from the relative-risk ratios on the effect of social preference regarding the choice to implement screening on the implementation of SDG12.3 by companies demonstrated that a 1 standard deviation increase means an 80,1 per cent increase in likelihood to opt for the screening on the implementation of SDG12.3 by companies. After controlling for professional, gender, education, age and wealth have been added. Here the effect of social preference becomes even more prevalent with a 91,3 per cent likelihood to opt for implementation of screening on SDG12.3.

Lastly, the results showed that women are nearly 5 times as likely to implement screening on SDG12.3 compared to men when selecting investments. This premise which has also been shown by multiple other researchers is important to take into account for the literature as it shows how strongly the presence of women within data sets can skew the results towards more favourable outcome of sustainable responsible investments.

However, as my dataset was predominantly male and not female, the importance of food waste reduction measures comes through even more.

This paper does not only add in terms of literature, but it also contributes strongly to the field of investing and the way a mediator should chose to interact with their clients. As shown in the results, 58 per cent of all respondents showed that they were in favour of implementing a screening of SDG12.3, this combined with the outcome investors expect higher financial return when screening on SDG12.3 shows that food waste reduction has become a more important aspect to consider. Therefore, mediators should take into consideration creating a tool in which they can screen investments on food waste reduction measures.

additionally, as it has shown that the perception of risk does not influence the choice to integrate a screening on SDG12.3, combined with the expectation of the respondents that the screening on SDG12.3 would impose more risk on the investment shows that the risk-bearing willingness of investors when selecting investments that are implementing food waste reduction measures is higher than those of conventional investments. This interlinks with the finding that investors have the need to align investments with their own personal values. This brings the question how mediators should go about finding out the preferences and beliefs of their own clients. These personal values should not be underestimated by the mediators of the

portfolios of clients. As this paper has shown that investors are 99.3 times more likely to choose screening on SDG12.3 as these align with their own perception of importance.

These premises do not only hold for the mediator side of the investments, also the receiving party, the company, should take into consideration the findings of this study. As it shows that investors greatly appreciate the presence of food waste reduction measures, 75,8 per cent stated they found food waste reduction measures medium to highly important. These companies could for that matter try to implement such measures to in the end attract more investors and potentially benefit from the increased flow of capital.

As any study, this study is not free from limitations. First, being that the research has primarily been conducted in The Netherlands, which is a country known for its relatively large share of assets invested sustainably. Eurosif (2018) and U.S. SIF (2018) stated that the amount of assets under management invested sustainably were around €2.8 trillion in the Netherlands and €12 trillion in the United states. This when taking into account that the Netherlands has merely 17 million inhabitants compared to the United States with 327 million, one can see that there the presence of sustainable investments in the Netherlands is considerably larger in relative terms compared to the United States. With the second limitation where all the millionaire respondents where clients of the same firm. This could, provide a bias towards sustainability if the company in question would promote sustainable investing. Therefore, these cultural differences should be taken into consideration when considering the results of this study.

Therefore, future studies could investigate this study in other European countries as well as American, Asian, African and Oceanic countries to determine whether the premises in this study still hold when taking into account different cultures. Additionally, this research could also be delimited from the sole premise of food waste reduction measures. One could also explore other fields of SDG, or potentially rank the different SDGs on scale of importance for investors. This could contribute even more towards the managing and receiver end of investments in terms of considerations when choosing sustainability measures.

Lastly, outside the field of investments, decision makers that are making decisions on behalf of other could take these findings into consideration. For example, individuals that are trying to reach a larger audience could use this premise to create a larger target group for public support being aligned with food waste reduction measures.