Master thesis

The effect of gender specific financial advice on investment decisions
Cross cultural research: The Netherlands VS India

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Abstract

In this paper a survey is conducted among Dutch and Indians respondents. With the obtained data, analyst gender effects were tested on the financial behaviour of retail investors. In addition to the gender effects, this paper investigates how much effect a photo of the analyst has on the respondents when they receive a stock recommendation of the analyst. Geert Hofstede showed that respondents from The Netherlands and India react different on the cultural dimension model.

The result of the obtained data showed that Dutch respondents are more willing than Indians to follow financial advice that is given by a female analyst. Due to the fact that The Netherlands is labelled as feminine society, were India is labelled as a masculine society.

In this paper also photo effect were found. For the Dutch respondents the photo effects were not as strong as for the Indian respondents. Dutch respondents are willing to follow text scenario that are given by a female analyst, were the Indian respondent are more willing to follow a photo scenario that is given by a male analyst.

Table of Contents

H1: Introduction

The weekend of 12 till 15 September 2008: well remembered by many as one of the darkest days in modern financial times: The announcement of their great loss in assets, resulting in a fall in market capitalization of 40% for Lehman Brothers (Kampen, 2009). The once shining bright star of the financial world caved into its own black hole and filed for bankruptcy the following week, making way for a shower of bankruptcies, and financial hardship lasting till today. Much money was lost, and investors still feel the weight of the credit crunch on the backs of their investments. Since the financial crisis, the investment banks have heavily downsized their employees with approximately 43% (Arslan 2009). Many common investors (consumers) and companies depend on tailored financial advice on financial analyst from companies like Lehman Brothers.

Financial advice may be found in different type of medias: television, internet, newspapers and so forth. When carefully analyzing the information from different sources for stock recommendations, unsurprisingly, we find that analyst providing recommendations are not always on the same page – if ever. There may be many reasons for the differences in financial recommendations provided: models used, source data, professional experience and personal 'feeling'.

In finance, the traditionally studied topics in relation to financial decision making considered firm-, industry-, and market-level explanations, over which the one has limited power. However, an increasing level of importance is devoted to the personal traits in financial analyst themselves and their important contribution to financial decision making (Malmendier et al, 2011).
There have been many studies in gender and risk aversion: Are women more risk averse? (Jianakoplos and Bernasek, 2007); Men, women and risk aversion: Experimental evidence (Eckel and Grossman, 2008); and Financial decision making and cultural background (Cross-Cultural Differences in Risk Perception, but Cross-Cultural. Similarities in Attitudes Towards Perceived Risk (Weber and Hsee, 1998). Most of such studies focussed on the corporate finance environment, financial managers and board members.
To add a new dimension to this study of phenomenon of gender bias in financial advice acceptance, we compare and contrast Dutch nationals with Indian nationals. In the paper (Marc Oliver Rieger, Mei Wang and Thorsten, 2011) they investigated how much impact a cultural can have when a decision is made. They found large differences between the countries they observed: difference, which they partially related to economic conditions and 'culture'.

In another paper, Weber (2013) studies whether nationality and religion, the two proxies used for 'culture' have an effect on risk tolerance. '…foreigners are less likely to be risk prone, which ultimately have impact on the decision that they made. This also applies for specific nationalities.

Turks, Italians, Greeks, and Ex-Yugoslavs tend to be more risk averse than others. Hence, cultural background does indeed have some impact on risk taking behaviour.'- Weber (2013).

Would a male consumer of financial advice react differently to advice from a man or a woman? – and vice versa. What drives the consumer to follow or not to follow the recommendation? ***How does gender influence financial decision outcome, and does this differ per country?***

H2. Literature review

In this section the basis of this research will be discussed, with reference to existing studies. Firstly, overconfidence in relation to gender is discussed. Secondly, risk and gender are discussed; a discussion of cross-cultural studies is provided. And lastly cultural dimensions of Geert Hofstede are discussed.

When looking at the current literature we see a clear discrepancy between gender and overconfidence and gender and risk. The difficulty of predicting the stock market is acknowledged in most studies on this topic, but in general men come out as more confident and therefore believe that their predictions are better than women's predictions (Block and Harper, 1991).

H2.1 Overconfidence and gender

There is much compelling research on the differences in confidence and gender. People are often overconfident about the accuracy of their estimates of uncertain quantities. Overconfidence may influence the output of the work because people do not realistically assess their abilities (Block and Harper, 1991). Reviewers have suggested that women display lower self-confidence than men across almost all achievement situations. The literature indicates that although low self-confidence is indeed a frequent and potentially debilitating problem among women, they are not lower in self-confidence than men in all achievement situations. Instead, it is argued that the nature of this difference depends upon such situation variables as the specific ability area, the availability of performance feedback, and the emphasis placed upon social comparison or evaluation (Lenney, 1977). While both men and women exhibit overconfidence, men are generally more overconfident than women. In addition to this while both genders are overconfident, undergraduate men in particular tend to be more overconfident. This is investigated by looking at how confident people are when they answer certain questions (Lundeberg, Fox, and Puncochaf 1994). If one relates overconfidence to the stock market, we see that men are more overconfident than women and therefore men trade more excessively and aggressively than women. Men trade 45% more than women. Due to the excess trading the net return of men and women is reduced by 2.65% and 1.72% respectively (Barber and Odean, 2001). This means that women are able to make higher returns than men based only on limited excess trading. We may also conclude that men do not make better investment decisions than women, because the data shows us otherwise. Perhaps there is a simple explanation for the high levels of trading on the financial markets; overconfidence. Naturally, humans will always overestimate their present capabilities, but also their future prospects. Another study concludes that overconfident investors who believe that the precision of their knowledge about the value of a security is greater than it actually is-trade more than rational

investors and that doing so lowers their expected utilities. Greater overconfidence leads to greater trading and to lower expected utility (Odean, 1998)(Beyer, 1990).

Looking at the aspect of money, money style item scores for young adult men and women are found to be consistently disparate. However men and women are both likely to see money as closely linked with esteem and power, men are more prone to feel involved and competent in money handling, and take risks to accumulate wealth. Where women have a greater sense of envy and deprivation with respect to money as a means of obtaining things and experiences that they can enjoy in the present. Therefore you could say that men are inclined to feel more competent than women do in financial matters (Prince 1993) – adding to their possible overconfidence.

At times it happens that people believe their own knowledge to be super to that of the people in their immediate environment. Lets say if you ask a class of 10 people how many of them consider themselves as good drivers, a lot – too many, statistically - of them will raise their hands. In this study Lichtenstein, Fischhoff, and Phillips (1982) looked at how often people overestimate the precision of their knowledge. The way they tested is to ask general knowledge questions. The respondents showed such high levels of confidence in their answers that they were willing to put money on the table for their validity. However the researchers concluded that individuals overestimate their knowledge 'too often' (Lichtenstein, Fischhoff, and Phillips 1982). It is interesting to see if people also overestimating their knowledge while working? By conducted an experiment to assess the subjective probabilities of investment bankers, one can conclude that not only men or women are overconfident, but also the investment bankers who are investing for consumers on the market. While the investment bankers should be the rational investors (Stael von Holstein 1972). Whereby theoretical, the rational investment bankers should only trade when they are in possession of new information not yet known to the market when doing so increases their expected utility (Grossman and Stiglitz 1980). Studies have investigated if overconfidence is also apparent in higher positions in a company. This hypothesis also applies to managers (Russo and Schoemaker 1992). Even at the top of a company, at C-suite level, we can see a pattern that firms run by female CEO's have lower leverage, less volatile earnings, and a higher chance of survival than firms run by male CEOs (Faccio, Marchica and Mura, 2012). This means that female CEOs do take less risk, but also are capable of building a good financial fundament for the company.

H2.2 Risk and gender

Confidence is not the only point of view that should be taken in consideration, the relation between risk taking behaviour and gender could be more important. The concepts of overconfidence and risk taking behaviour are closely linked to each other, and oftentimes co-exist in research. It can be concluded that the personality trait, in the cases discussed by Goel and Thakor (2008) and

Malmendier and Tate (2008), overconfidence, can significantly affect the manager's risk tolerance and eventual risky decision making. In tandem with most literature on the matter, a higher level of overconfidence would lead to a higher level of risk taking behaviour.

There is a clear fundamental difference between men and woman, the willingness to take risk. Women are taking considerably less risk than men (Maxfield, Shapiro, Gupta and Hass, 2010). It is interesting to see what different strategies are developed by the different genders. Men and women adopt different strategies in financial decision environments but that these strategies have no significant impact on ability to perform. Strategies are more easily observed than either risk preference or outcomes in day-to-day decisions strategy differences may reinforce stereotypical beliefs that women are less able financial managers (Powel and Ansic, 1997).

In general consumers do consider that men are more capable in terms of finance knowledge to take more complex investment decisions in comparison to women (Eckel and Grossman, 2008). This of course does not necessarily mean that men are more successful than women. For many decades the role of women was mainly focused on domestic life. In the past there were some specifics jobs, which would 'fit' women. Today, that perception is changing, as women are also seen as great businesswoman (Blaszczyk, 2002).

How men and women experience risk is different. Johnson and Powell (1994) conducted a laboratory experiment to see what kind of decisions both genders take. In the experiment they looked how the different genders bet on horse and dog races. They find that men: 1) make bigger bets on average; 2) make more and bigger higher-risk "win" bets, and fewer and smaller lower-risk "each-way" bets; 3) make more and bigger higher-risk "straight forecast" bets, and fewer and smaller lower-risk "reverse forecast" bets; and 4) make fewer and smaller "multiple bets.

Taking the scenario that men and women could make their own investment decisions regarding their pension. Agreeing to most prior research and society's general inclinations on the matter, women held a significantly greater share of their account balances in relatively low-risk fixed income investments and a significantly smaller share in higher-risk employer stock. Therefore women have a greater risk aversion than men (Bajtelsmit and Van Der hei, 1997). There is a difference in terms of risk aversion between the genders, more interesting is to see that single women make more risk aversion decision in terms of finance than single men. When the wealth increases the proportion of wealth held as risky assets is estimated to increase by a smaller amount for single women than for single men. Also age, race and number of children influence the difference between the genders. An explanation why men are more affluent than women could be due to the lower levels of risk aversion (Jianakoplos and Bernasek, 1998). Also married men and women were less risk prone than their single men or women

and that single women were less risk prone than single men (Sundén and Surette, 1998). What causes the differences in the risk averseness? If we look at the financial risk aversion on testosterone level, we see that testosterone has both organizational and activation effects on risk-sensitive financial decisions and long- term career choices (Sapienza, Zingales and rio Maestripieri, 2009).

Would it make a difference when looking at different positions in a company regarding risk and overconfidence? Female and male directors differ systematically in their core values and risk attitudes. Female directors are more benevolent and universally concerned but less power oriented than male directors. The female directors are less tradition and security oriented than their male counterparts. More important is that the female directors are more risk loving than male directors. Thus, having a woman on the board need not lead to more risk-averse decision-making (Adams and Funk, 2012). Other the more recent literature, Adams and Ragunathan (2013); Matsa and Miller (2012) also find that there is no significant difference between the propensity of risk taking between men and women at a top management level. The data sample for this study is taking from the 'top' US companies and their boards, thus the result are related to, and support the more recent turn in this literature. While the outcome of the regression suggests that one may not conclude that women are more risk taking then men as executives, it must be realised that the results do indicate that there is no difference risk taking behaviours. This is an important realisation seeing the recent efforts in business to involve more women on the work floor and at the top of the firm. Persistent results such as obtained by recent literature, supported by smaller scale studies will over time help deconstruct the stereotypical disposition towards women in the boardroom, which would eventually lead to the glass ceiling concept to be dissolved (Chopra, 2014). Also the financial analyst/investors observe show that they have a different risk aversion on personal level than on professional level (Eriksen and Kvaløy, 2010).

H2.3 Human Aspects: Cross cultural studies and attractiveness

Traditionally, not much time has been spent on analysing the importance of the human aspects in finance-related studies. It is only recently that this topic gained popularity. Ever since, there have been many studies on behavioural corporate finance, on various topics.

When looking at cross-cultural differences between genders we see that in the entrepreneurial orientation among students there are significant differences between gender and nations. The research (Lim and Envinck, 2013) has been conducted in the following countries: US (96), Korea (114), Fiji (80), and Malaysia (99). It is important to have customized approaches on gender in different cultures regarding those students (Lim and Envinck, 2013). Also if we look at the differences between USA and China we see that Chinese people were significantly less risk averse than Americans (Weber and Hsee, 1998).

Not much research has been done for the topic of cross-cultural risk taking behaviour and gender.

Simply because of the complexity of defining cultural and demographic differences and how to estimate these. As agree with prior studies, we assume to find that people in western nations are more likely to be less risk averse (and in effect, more risk loving) than people in eastern countries.

When analysing people based on how good-looking they are, we see than plain people earn less than average people's salary, it is found that average-looking people earn less than good looking people. Attractiveness is very important with human capital (Biddle & Hamermesh, 1994). A similar study was also conducted for lawyers (Biddle & Hamermesh, 1999). Again, similar findings were obtained. Firms with better looking CEO's have a higher revenue and grow faster than comparable firms with less good-looking CEO's. Therefore this would suggest that human capital could influence consumers (Bosmann, Biddle, Pfann & Hamermesh, 1997). In the experiment that is conducted in 1992, Feingold found that physically attractive people were perceived as more sociable, dominant, sexually warm, mentally healthy, intelligent, and socially skilled than physically unattractive people (Feingold, 1992). Physical attraction plays an important role in likability. Taking this finding one step further, we expect physical attractiveness to strongly support the cultivation of trust.

H2.4 Geert Hofstede national culture model

Geert Hofstede (2011) investigated that people will react differently to situations that they are in based on their values that are influenced by their culture. Hofstede created a national culture model that consists out of 6 dimensions. Due to these 6 dimensions a distinguish between cultures can be made. The scale of these six dimensions runs from 0-100, were the average is 50. If someone has a score under 50 Geer Hofstede consider that as a cultural relatively low score. Next the six dimensions will be explained.

The **first dimension is Power distance Index (PDI)**. Hofstede defines PDI as: '*This dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. The fundamental issue here is how a society handles inequalities among people. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low Power Distance, people strive to equalise the distribution of power and demand justification for inequalities of power' (Geert Hofstede, 2010).*

The **second dimension is Individualism versus Collectivism (IDV).** Hofstede defines IDV as: *'The high side of this dimension, called individualism, can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. Its opposite, collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look*

after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we." (Geert Hofstede, 2010).

The **third dimension is Masculinity versus Femininity (MAS).** Hofstede defines MAS as: *'The Masculinity side of this dimension represents a preference in society for achievement, heroism, assertiveness and material rewards for success. Society at large is more competitive. Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. Society at large is more consensus-oriented. In the business context Masculinity versus Femininity is sometimes also related to as "tough versus tender" cultures' (Geert Hofstede, 2010).*

The **fourth dimension is Uncertainty Avoidance Index (UAI).** Hofstede defines UAI as: *'The Uncertainty Avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? Countries exhibiting strong UAI maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles' (Geert Hofstede, 2010).*

The **fifth dimension is Long Term Orientation versus Short Term Normative Orientation (LTO)*.** Hofstede defines LTO as: *'Every society has to maintain some links with its own past while dealing with the challenges of the present and the future. Societies prioritize these two existential goals differently.*

Societies who score low on this dimension, for example, prefer to maintain time-honoured traditions and norms while viewing societal change with suspicion. Those with a culture which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future.

In the business context this dimension is related to as "(short term) normative versus (long term) pragmatic" (PRA). In the academic environment the terminology Monumentalism versus Flexhumility is sometimes also used' (Geert Hofstede, 2010).

The **sixth dimension is Indulgence versus Restraint (IND).** Hofstede defines IND as: '*Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms' (Geert Hofstede, 2010).*

H2.5 Difference between The Netherlands VS India, based on the national culture model

Looking at the cultural dimensions of the survey respondents (India and The Netherlands). We see quite some differences between the two countries. Here the differences between the six dimensions will be discussed.

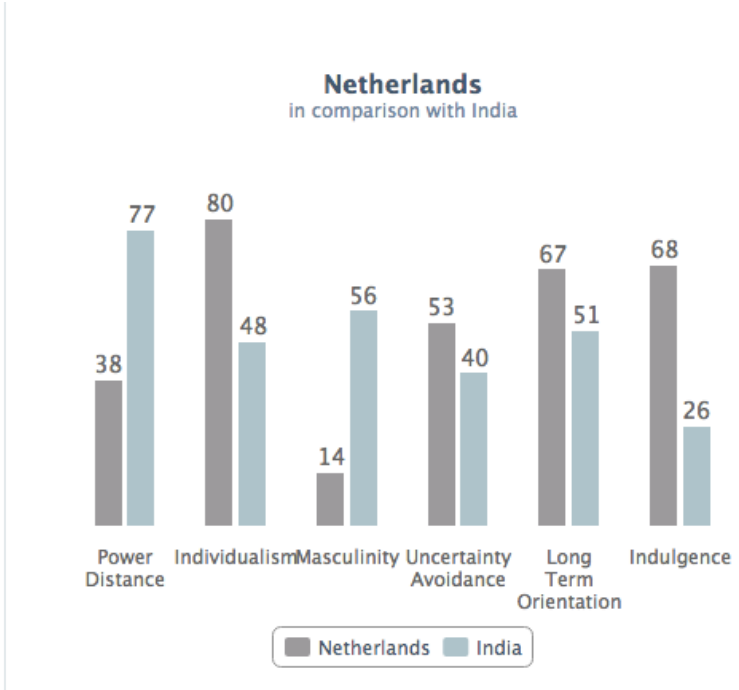

Figure 1: Hofstede cultural dimension model (The Netherlands VS India)

H2.5.1 Power Distance

The Netherlands score low on the scale of Power Distance (score 38 on a scale of 100). This means that the style of Dutch people is independent. The Dutch society does not like hierarchy, but like equal rights were everybody is accessible. Also Dutch people appreciate that the 'power' is decentralized were the manager count on the experience of their team. For the Netherlands control is something that the inhabitants do not like and that the atmosphere is very informal also to their superiors.

India scores very high on the PDI dimension of Geert Hofstede (score of 77 on a scale of 100). For India this means that they appreciate a hierarchy, were the manager is in control. Here all the power is centralized. The managers in India expect that their employees are obedience, which is the opposite of the Netherlands. Indians employees expect to be directed by their manager and the manager should clearly state what his or her expectation is. The way of communications between managers and employees is always from top to bottom, it is not very common that employees give feedback to their superiors (Geert Hofstede 2010).

H2.5.2 Individualism

The Netherlands has a score of 80 on a scale of 100 on the individualism dimension. This means that Dutch people will take care of themselves and their families only. Here it can be stated that Dutch people are individuals.

India is a society were collectivistic and individualism are important. India has an 'average' score of 48 on a scale of 100 in this dimension. The collectivist side of the society means that Indians have a high preference for belonging to a larger social framework in which individuals are expected to act in accordance to the greater good of one's defined in groups. In this type of situation the individuals are influenced by several aspects of the society, e.g. family, neighbours and other aspects that are important in the social community of India. At the other hand in case for the individualism society in India is seen as a result of its dominant religion and philosophy, it's Hinduism. In the Hinduism religion it is common that they believe in a circle of death and rebirth, with the manner of each rebirth being dependent upon how the individual lived the preceding life. Therefore every individual is responsible for the choices they he or she makes in his life. These choices will have impact on their rebirth. This focus on individualism interacts with the otherwise collectivist tendencies of the Indian society which leads to its intermediate score on this dimension (Geert Hofstede 2010).

H2.5.3 Masculinity

If a country has a high score in the dimensions of masculinity that will indicate that that particular country has a society that is driven by competition, achievement and success. Here it is important to be the best. In case a country has a low score that will indicate that the society is build on dominant values, which is the benchmark for others. One of the quality is a low masculinity country is that the quality of life is the sign of success and be the best is not important.

The Netherlands has a score of 14 on a scale of 100 for the masculinity dimension and therefore is being classified as feminine society. In the Netherlands it is important to have a good balance between life and work. To be part of the team is more important than to be the one that outstands in the team. In a feminine society it is common that people strive for equality, solidarity and more quality in their working lives. In case that there are conflicts, compromise and negations are the key words.

India is a very masculine society with a score is 56 on a scale of 100. In India to act wealthy and be successful is very important. We should take in consider that India is also a very spiritual country with various religions. When a country is masculine that will indicate that the focus is on perform and achievements. The professional career is the centre of life, were success is the most valuable thing (Geert Hofstede 2010).

H2.5.4 Uncertainty avoidance

The dimension uncertainty avoidance has to do with the way a society deals with the fact that the future can never be known: should we try to control the future or just let it happen?

The Netherlands has a score of 53 on a scale of 100 in this dimension, meaning that Dutch people would slightly like to avoid uncertainty.

India has a score of 40 on a scale of 100 on the uncertainty avoidance dimension. In India there is an acceptance for imperfection. Here nothing has to go according to plan neither to be perfect. India is traditionally a patient country where tolerance for the unexpected is high. Indians in general do not feel driven to take immediate actions to change their routines. Here rules are just a place to avoid some of the rules and to be innovative with interpreting the rules. A word that is commonly used is that they are willing to adjust (Geert Hofstede 2011).

H2.5.5 Long-term orientation

The long-term orientation describes how every describes how every society has to maintain some links with its own past while dealing with the challenges of the present and future.

The Netherlands receives a high score of 67 on a scale of 100 in this dimension. This means that the Dutch people are more pragmatic. In pragmatic societies people believe that the truth really depends on the situation, the context and time. People from pragmatic societies are able to easily adapt traditions

India has a score of 51 on a scale of 100 in this dimension. For India this means that they prefer a long-term, pragmatic culture. The concept of karma dominates religious and philosophical thought. Time is not so important as it is to western cultures. As mentioned before religion in India is very important, they also respect and appreciate religious views from all over the world. Often Hinduism is considered as more than a religion, but more as a philosophy (Geert Hofstede 2011).

H2.5.6 Indulgence

The dimensions indulgence is defined as the extend to which people try to control their desires and impulses, based on the way they are raised.

Dutch society has a high score of 68 on a scale of 100 in this dimension. This means that the Netherlands is an indulgence culture. Dutch people generally exhibit a willingness to realise their impulses and desires with regard to enjoying life and having fun. They have a relatively positive attitude towards optimism. In comparison with The Netherlands India receive a low score of 26 on a scale of 100. This means that they are considered to be a culture that is restrained. Due to the low score we can say that India is a country that has a tendency to cynicism and pessimism. People in restrained societies have generally the perception that their actions are retrained b social norms (Geert Hofstede 2011).

H3. Hypothesis: research questions

The focus of this research is to investigate how much impact the gender of the financial analyst, has on given financial advice. With this research as mentioned before, I expect people from different nationalities to react differently to financial advice by male and female. Therefore respondents from The Netherlands and India are comparable with each other. I stress the fact that this research focus is on retail investors, who make decisions themselves regarding their personal investments in the market.

The main research question this paper aims to answer is:
How does gender influence financial decision outcome, and does this differ per country?

Women seem to be willing to take considerably less risk than men (Maxfield, Shapiro, Gupta and Hass, 2010). The article outlines the general social assumptions that men and women have completely different strategies for making financial decisions. For example, women tend to invest a relatively large part of their pension portfolio in low-risk fixed income investments, while this is not so true for their male counterparts (Bajtelsmit and Van Der Hei, 1997).

Based on the Hofstede's cultural dimension, it is expected that the higher the masculinity index of country, more respondents would follow advice from male analyst rather than female analyst. The Netherlands has a score of 14 on a scale of 100 and therefore is classified as having a feminine society. On the other hand, India has a very masculine society with a score is 56 on a scale of 100. Therefore, I expect that based on the ranking of countries that respondents in The Netherlands would thus be more likely or more open and willing to follow a buy recommendation from a female analyst rather than a male analyst. In India it is expected that respondents are more willing to follow buy recommendation from a male analyst rather than a female analyst.
In order to test whether respondents are more likely to follow buy advice from female analysts, the first hypothesis is formulated as follow.

H1: Respondents are more likely to follow a buy recommendation from a female analyst than from a male analyst. Following the Hofstede masculinity ranking, Dutch respondents are more likely to follow female analyst buy advice followed by Indian respondents.

An initial test was executed. The purpose of this test was to ascertain whether a buy recommendation given by a female analyst has effect on the respondent. This test used the following regression equation:

$$Buy_i = \alpha + \beta_1 \times Female.analyst_i + \varepsilon_i \quad (1)$$

In the regression, 'Buy_i' indicates whether the respondents followed the buy recommendation. Here 'Buy_i' is a dummy variable, where one (1) indicates that the respondents followed the advice and zero (0) means that the respondents did not follow the advice. The variable '$Female.analyst_i$' indicates whether the analyst who gave the recommendation is a woman. The ε_i *variable* is the error term. In case 'β_i' is significantly and differ from zero, then following buy advice is related to whether the recommendation is given by a female analyst.

The gender effect can differ per country, namely, the female analyst effect per country was also investigated by including country dummies. The country code is related to the nationality of the respondents. In order to investigate this effect, the following regression equation was formulated:

$$Buy_i = \alpha_0 + a_1 \times female.analyst + \beta_1 \times NL_i + \beta_2 \times female.analyst_i \times NL_i + \varepsilon_i \quad (2)$$

The regression equation (1) and (2) for H1 will also be estimated for the sell scenarios. The gender characteristics of the analysts could explain why respondents are willing to follow buy advice from the analyst. In this paper, it was conjectured that the effect of H1 could potentially be explained by the following characteristics of the analysts: financial literacy, conservativeness, trustworthiness, attractiveness and risk taking. The investors were asked to score the analysts on these characteristics on a scale of from 1 to 5. It is expected that respondents who scores their analyst high on the control variables would be more inclined to follow their buy recommendation than an analyst who got scored low on these variables. In order to test which of the control variables can explain why respondents are following the buy recommendation of the analyst, the second hypothesis is formulated as follow.

H2: Respondents are more likely to follow a buy advice from analyst who they scores high in financial literacy, conservativeness, trustworthiness, attractiveness and low in risk taking.

By conducting this hypothesis we may distinguish what triggers the respondents to follow the buy advice. To test H2 the variables per gender are used, giving 10 variables in total.

$$Buy_i = \alpha_0 + \alpha_1 \times Female.analyst_i + \beta_1 \times NL_i + \beta_2 \times NL_i \times Female.analyst_i + \beta_3 \times Financial\ literacy\ male_i + \beta_4 \times Conservativeness\ male_i + \beta_5 \times Trustworthiness\ male_i + \beta_6 \times Attractiveness\ male_i + \beta_7 \times Risk\ taking\ male_i + \beta_8 \times Financial\ literacy\ female_i + \beta_9 \times Conservativeness\ female_i + \beta_{10} \times Trustworthiness\ female_i + \beta_{11} \times Attractiveness\ female_i + \beta_{12} \times Risk\ taking\ female_i + \varepsilon_i \quad (3)$$

After executing the second general test, more in depth analyses will follow. The regressions for H2 will also be estimated for the sell scenarios. Respondents perceive the recommendations much more different when a photo of the analyst is included (Hamermesh and Biddle, 1994; Biddle and Hamermesh, 1998; Pfann, Bosman, Biddle, and Hamermesh, 2000). The way that human capital could influence respondents could be significant, especially if the analyst is perceived to be good-looking. One may argue that when a photo is involved, the attractiveness of the person may contribute to the decision making of the consumer.
The scenarios in this paper as mentioned earlier had three treatments, namely (1) a text-only treatment where the gender and name of the analyst were described, (2) a text + photo treatment, where a photo of the analyst was added, and (3) a control treatment, where no information regarding the gender was provided.

This test, which is included into this paper expect that the gender effect is stronger when a photo is involved. In order to test if a photo of the analyst is involved has stronger effects on the respondents than when there is no photo involved, the third hypothesis is formulated as follow.

H3: Text + photo of the analyst has a stronger analyst gender effect than text only (gender and name of analyst) in a buy scenario.

By conducting this hypothesis we can distinguish if the addition of the photo of the analyst makes a difference for the respondents when making the decision to buy or not.

$$Buy_i = \alpha_0 + \beta_1 \times Text_i + \beta_2 \times Photo_i + \varepsilon_i \quad \textbf{(4)}$$

The variable 'Text' points to the respondents presented with text scenario. The variable 'Photo*'* points to the respondent presented with a text + photo scenario. The variable text can have a score of 0 or 1, the respondent is following the advice when a text scenario is shown and 0 whether the respondent is not following the advice. The principle counts for the variable photo. Whether the effect of a photo is stronger than the effect of text was also tested, by comparing absolute values. H3 is not rejected if β2 is significantly larger than β1.

This initial test points out whether a photo effect existed. To investigate whether this effect differs for the analyst's gender, the following regression equation was estimated for the full sample, as well as for each individual country.

$$Buy_i = \beta_0 + [\beta_1^* \times Text_i \times Female.analyst_i] + [\beta_2^* \times Text_i \times Male.analyst_i] + [\beta_3^* \times Photo_i \times Female.analyst_i] + [\beta_4^* \times Photo_i \times Male.analyst_i] + \varepsilon_i \quad \textbf{(5)}$$

This regression points out whether there is a gender effect. In case a gender effect exists, it is expected to be present when respondents are confronted with a scenario were a photo is shown. The regressions for H3 will also be executed for the sell scenarios.

H4. Methodology and data

H4.1 Focus

The data necessary to answer the hypotheses (as formulated in the introduction) was obtained by a survey. Dutch respondents were mostly persons between the ages of 18-50 from the south of The Netherlands. For the Indian respondents, the focus was on expats in the Netherlands, also between the ages of 18-50.

H4.2 Data Source

The data[1] was obtained using a survey that consist out of 6 parts. In the **first** part specific demographic questions were asked like age, country, gender and degree (Wyse, 2012).

The **second** part of the survey contains questions concerning risk aversion. The score that respondents can get vary from one to three, based on these questions we can label the respondents in categories from low to high risk averse.

Low-level cognitive question are asked in the **third** part of the survey. With these questions the respondents need to focus on straightforward quantitative information rather than deep understandings (Wilen, 1991). By asking cognitive questions we can label the respondents in a scale that vary from one to three.

In the **fourth** part the respondent were be asked about their finance literacy and knowledge of general macro-economic matters. These questions were asked to measure how well the respondent is aware of the financial and economic climate. The respondents were asked seven questions. Again, depending on how many of those questions were correctly answered, we can label the respondent. Due to the labelling we can also make differences between groups to see how much they know concerning finance literacy.

In the **fifth** part of the survey, the most important questions are asked. Are respondents willing to follow advice that is given from a financial analyst of not? In this part of the survey every respondents

[1] Appendix 2: survey, designed in Qualtrics software

is presented with two decisions. The first decision is a randomly selected as a buy/sell scenario. The decision the respondents has to make is whether (s)he is willing to follow the buy/sell advice from a financial analyst. Next, if the first scenario was a buy scenario, the second decision will be a sell scenario and a photo of the analyst is added. In case the first scenario was a sell scenario, the second decisions is a buy scenario and a photograph of the analyst is shown as well. The set-up is as follows (appendix 1):

For the first scenario, see below the four possible questions:
1) Buy advice from male or female analyst (gender of analyst picked at random)
2) Sell advice from male or female analyst (gender of analyst picked at random)
3) Sell advice from analyst, gender unknown
4) Buy advice from analyst, gender unknown

Overall, I distinguish between four possible
For the second scenario, see below the four possible questions:
1) Buy advice from male or female analyst (gender of analyst picked at random), including photo of analyst
2) Sell advice from male or female analyst (gender of analyst picked at random), including photo of analyst
3) Sell advice from analyst, gender unknown, including photo of analyst
4) Buy advice from analyst, gender unknown, including photo of analyst

The analyst that are used in each scenario are actual analysts from major investment banks. Here we used only the surnames of the analyst. Also, the scenarios presented are real stocks recommendations for which the real names of the companies were removed, because the respondent should not be influenced by the name of the company due to familiarity. Respondents perceive the recommendations as different when a photo of a male of female analyst is involved (Hamermesh and Biddle, 1994; Biddle and Hamermesh, 1998; Pfann, Bosman, Biddle, and Hamermesh, 2000). It is common for individuals to fabricate an image of others, when they see a photo: for example they, imagine how smart or crisp the other is (Feingold, 1992). As previously mentioned when discussing the existing literature, naturally, we humans attribute value to an image, photo or photo. Importantly, for this research, people especially add value to photos of others when these seem physically appealing to them.

In the **sixth** part, six (‘6’) control variables were asked (financial literacy, conservativeness, trustworthiness, attractiveness and risk taking). These questions concern the opinion (financial literacy, conservativeness, trustworthiness, attractiveness and low in risk taking) that the respondents

have regarding the analyst (male or female). The type of questions that are asked: do you believe that this person takes a lot of risk, or knows a lot about finance.
Each question has a score scale of one till 6 (‘1’ till ‘6’). This is an important part, as these scores act as control variable when looking at the investment decisions that the respondent have made post advice given. These questions derived from the national cultural dimension model of Geert Hofstede (2010). Here we can compare how our survey difference with the data of Geert Hofstede.

H5. Discussion of the Data and Empirical Results

H5.1 Description of the Survey Sample

In this section an overview of the demographics of the respondents is given. The dataset that is used in the analysis consists out of 410 valid cases. In this paper the hypothesis are tested using OLS regressions. The respondents are divided in two groups (see table 1, demographics of the respondent):

- Dutch, mainly students who are living in The Netherlands
- Indians, mainly expats who are currently living in The Netherlands

Although the Indian expats are living in The Netherlands, I argue that their cultural upbringing is so strong that according to the Hofstede characteristics, the respondents can still be classified as Indian. The average age of the whole sample is 33,88 years. The average age for the Dutch respondents is 30,34 years and Indian respondents is 35,53 years. The average level of education from the respondents is a score of 8,87 (which is comparable with having a master degree). Here, the highest educated people are Indians with a score of 9,47. The Dutch respondents have the highest knowledge regarding finance (4,61) where the average score of the respondents is 4,29. The Indian respondents have the highest Risk aversion 1,6, were the average of the sample is 1,42. The Dutch respondents have an average Risk aversion of 1,33.

Table 1: Demographics of the survey respondent

	Netherlands	India	Total
Male	84	135	219
Female	46	145	191
Total	130	280	410

The table presents an overview of the number of respondents by country and gender.

H5.2.1 Results analyst gender effect

First, regression equation (1) is estimated and this provides an indication whether the respondents followed the buy recommendation from the female analyst. With regression (1) I test the effect that a female analyst has on respondents who have followed the buy recommendation. The estimation results presented in Table 2 shows that the female effect on buy decision was not statistically significant. The similar regression is conducted for the sell scenario. Here the female analyst effect is negative and statistically significant on a 5% level.
It is expected that Dutch respondents are more willing to follow the buy scenario from female analyst rather than Indians. This is due to the masculinity score of each country. The Netherlands is a feminine country, were everybody is treated as equal. India counts as a masculine country where it is expected that the investors are driven by competition and want to be the best.

The estimation results of equation 2 are presented in Table 2 below were the gender effect per country is tested. First I am going to discuss the findings for the buy advice and then for the sell advice.

The buy advice findings clearly show that there is a significant difference in following percentage in case of a male or female analyst. The constant term indicates that in 64,3% of the cases Indian responds follow a male analyst buy advice, while only in about 50% of the cases a female analyst buy advice if followed. The coefficient (NL x female analyst) is statistically significant. Thus there is a clear effect showing that Dutch respondents are following advice that is given by female analyst more than Indian respondents. The effect in India is the coefficient female analyst (-0,14). The effect is negative and also statistically significant. The negative effect indicates that Indian respondents are less inclined to follow buy advice buy advice given from a female analyst compared to Dutch respondents. This is in line with out expectations.

Dutch responds are less likely than Indian respondents to follow buy advice from a male analyst, but more likely to follow the buy advice from a female analyst.
For sell advice, we see a comparable pattern. Indian respondents are significantly less likely to follow sell advice from a female analyst. This is also the case for Dutch respondents, but this difference is not statistically significant.

For H1, not only the regressions 1 and 2 are used. To support the results from H1, an overview of the percentages of participants who had followed the investment advice is shown (see Table 3). Dutch respondents are more likely to follow advice given from female analyst (63%), rather than male analyst (56%). For the Indian respondents the result is exactly opposite.

The gender effect is statistically significant for The Netherlands and India. Dutch respondents are more likely to follow female analyst and Indians rather follow male analyst. This is in line what was expected for H1. The same effects are found for the sell scenarios, but these are less strong.

Table 2: Female analyst influence on following investment decisions

	Buy scenario		Sell scenario	
	Regression (1)	Regression (2)	Regression (1)	Regression (2)
Female.Analyst	0,064 (1,28)	-0,142 (2,36)*	-0,1196 (2,30)*	-0,128 (2,40)*
NL		-0,080 (1,27)		0,054 (0,09)
NL x female.analyst		0,210 (1,98)*		-0,066 (0,70)
Constant	0,617 (21,07)**	0,643 (18,11)**	0,504 (16,73)**	0,5112 (14,65)**
Observations	410	410	410	410
R-squared	0,00	0,01	0,01	0,01

Table 2 shows the estimations results of equation 1 and 2 for the buy and sell scenario.
In equation 1 the general female analyst effect is tested for the buy scenario as well as for the sell scenario.
In equation 2 the gender effect is tested per country, the list of definitions from the variables can be found in Appendix 3.
Absolute value of t-statistics in parentheses
* Significant at 5%; **Significant at 1%

Table 3: Respondents followed buy investment advice

	Dutch	Indians
Male analyst	56%	64%
Female analyst	63%	50%

The table presents an overview of the percentage of respondents who followed male/female analyst per country.

H5.2.2 Results control variable

In order the test H2, regression 3 is conducted (see Table 4). In regression 3 the five control variables are included. The control variables show the assumptions and opinions of the respondents regarding the analyst. The estimation results are shown in Table 4. Table 4 shows that none of added control variables were statistically significant, which result in a rejection of Hypothesis 2. For the sell scenario similar results were found.

In order to test the difference between Indian and the Dutch respondents for their impression regarding the analyst, Regression (3) is estimated again, for each country. First I will discuss the findings of the Dutch respondents and than for the Indians respondents. In Table 5 the estimated results are shown for

Dutch and Indian respondents.

In the Dutch dataset no gender effects were found for the buy scenario. When Dutch respondents follow advice that is given by a male analyst it is mainly driven by the control variable attractiveness (0,085). For the female analyst this is conservativeness (0,083).
In Table 5 also the estimation from the sell side are provided. As well as for the sell scenario no gender effects were found. Dutch respondents in the sell side for the male analyst are driven by the attractiveness (0,0980) and for the female analyst it is knowledge (-0,013). This is a similar pattern, were male analyst are appreciated by their looks and female analyst by their knowledge.

In the Indian dataset no gender effect were found for the buy scenario. Indians tend to disregard advice given from female analyst, but they do value the female knowledge (0,007). Even if this coefficient is low, out of the 5 control variables it is the only variable which is positive. As well as or the male control variables Indians respondents value knowledge (0,012). Here we clearly can see the masculinity of the Indian society. India is a masculine country were they are highly competitive, Indians want to be the best. The data supports the fact that India is a masculine country.
For the sell side similar data is found, no gender effect were found. For the male control variables, conservativeness has the highest coefficient (0,029). For the female control variables at the sell side, knowledge has the highest coefficient (0,008). A possible explanation for the conservativeness could be that Indian respondents want to get the highest returns as possible and for that they also need to be patience.

Table 4: Female analyst effect on buy/sell scenario incl. Control variables

	Buy scenario Regression (3)	**Sell scenario** Regression (3)
Female.Analyst	-0,068	-0,200
	(1,04)	(2,96)**
NL	-0,039	0,053
	(0,60)	(0,80)
NL x female.analyst	0,176	-0,163
	(1,61)	(1,49)
Male knowledge	0,016	-0,057
	(0,60)	(1,09)
Male conservativiness	-0,019	0,006
	(0,85)	(0,24)
Male Trustworthiness	-0,009	0,038
	(0,38)	(1,79)
Male attractiviness	0,021	0,038
	(1,01)	(1,79)
Male risk taking	-0,036	0,011
	(0,39)	(0,54)
Female knowledge	0,017	-0,006
	(0,88)	(0,29)
Female conservativiness	0,010	0,005
	(0,47)	(0,20)
Female Trustworthiness	-0,024	-0,030
	(1,19)	(1,04)
Female attractiviness	-0,023	-0,030
	(1,05)	(1,03)
Female risk taking	-0,015	-0,015
	(0,80)	(0,76)
Constant	0,926	0,718
	(8,64)**	(5,38)**
Observations	410	410
R-squared	0,05	0,04

The table shows estimation results of equation 3, for the buy and sell scenario for the full dataset.
In equation 3 the female analyst effect is tested with the five control variables.
The list of definitions from the variables can be found in Appendix 3.
Absolute value of t-statistics in parentheses
* Significant at 5%; **Significant at 1%

Table 5: Female analyst effect on buy/sell scenario per country incl. Control variables

	Buy scenario		Sell scenario	
	Dutch	Indians	Dutch	Indians
Female.Analyst	0,170	-0,113	-0,033	-0,205
	(1,56)	(1,70)	(0,29)	(2,81)*
Male knowledge	-0,011	0,012	-0,079	-0,045
	(0,15)	(0,42)	(0,97)	(1,51)
Male conservativeness	-0,043	-0,026	-0,084	0,029
	(0,76)	(1,10)	(1,39)	(1,14)
Male Trustworthiness	-0,063	-0,010	0,061	0,001
	(0,85)	(0,39)	(0,78)	(0,02)
Male attractiveness	0,085	0,002	0,098	0,026
	(1,79)	(0,06)	(1,65)	(1,05)
Male risk taking	-0,087	-0,028	0,008	0,019
	(1,62)	(1,33)	(0,14)	(0,87)
Female knowledge	0,036	0,007	-0,146**	0,008
	(0,49)	(0,33)	(1,82)	(0,36)
Female conservativeness	0,083	-0,002	0,051	0,001
	(1,36)	(0,09)	(0,79)	(0,03)
Female Trustworthiness	-0,033	-0,025	0,003	-0,036
	(0,49)	(1,15)	(0,04)	(1,56)
Female attractiveness	-0,093	-0,007	-0,007	-0,032
	(1,66)	(0,28)	(0,12)	(1,26)
Female risk taking	0,080	-0,030	0,050	-0,014
	(1,46)	(1,48)	(0,86)	(0,66)
Constant	0,348	1,143	0,242	0,740
	(1,74)	(8,93)**	(1,08)	(5,10)**
Observations	130	280	130	280
R-squared	0,16	0,08	0,10	0,07

The table shows estimation results of equation 3, for the buy and sell scenario per country.
In equation 3 the female analyst effect is tested with the five control variables.
The list of definitions from the variables can be found in Appendix 3.
Absolute value of t-statistics in parentheses
* Significant at 5%; **Significant at 1%

H5.2.3 Results of photo effect

For H3, it is investigated whether there is a significant difference in following investment recommendations when the respondent gets a text advice or one including a photo of the analyst. The estimation results are shown in Table 6. First I will discuss the results of the photo effect than the photo effect when the gender effects are included.

The photo effect finding for the buy scenario is statistically significant (0,181), as expected. For the sell scenario no significant results were found. If respondents are confronted with a buy recommendation when a photo of the analyst is included they are more likely to follow the buy recommendation from the analyst.

With the estimation results of regression (4), it is not possible to see the gender effect. Therefore equation 5 is executed (Table 6). Here it is clearly stated that the photo effects for both gender are statistically significant at 5% for female analyst (1,97) and 1% for male analyst (3,14). However the text effect for female analyst is also significant at 5% (2,55).
When respondents are confronted with a text scenario they are more willing to follow female analyst (0,1762). This is in line what is found in Table 2, were Dutch respondents are confronted with a buy scenario from a female analyst (0,210).
For the sell scenario no significant results were found when gender effect were included.

To further specify this gender effect, regression 5 is conducted for the data of The Netherlands and India. In Table 7 the estimation results of the Dutch and Indian respondents are shown. First I will discuss the results of the Dutch respondents and after that the results of the Indian respondents.

There is a significant positive relationship between a buy recommendation given by a female analyst without a photo and following this advice, based on the result that is significant at 1%. However the coefficient are positive. For the Dutch data set there are not significant photo effects. The only coefficient in this equation that is negative is the male text scenario. Looking back at the masculinity of a country (Geert Hofstede, 2011) The Netherland is a feminine country. Dutch respondents are more likely to follow advice from a female analyst rather than from a male analyst. The addition of a photo of the female analyst does not show a stronger effect for this relation. The sell side does not show any significant results. Also for the sell side when a photo of the female analyst is shown, it has a negative effect on the Dutch respondent.
It may seem that Dutch respondents are looking into theoretical, textual details more when they receive the buy recommendation. They value text more than the photo of the analyst. The results suggest that Dutch respondents regard the addition of a photo of the analysts as unnecessary noise.

Here we can conclude that Dutch respondents are more likely to follow buy recommendation from a female analyst. The addition of a photo of the analyst does not have a strengthening effect on the respondents.

The regression (5) is also repeated for the Indian dataset, Table 7. Here I find significant results for the male text scenario and the photo scenarios. A possible explanation for the significant result of the male text scenario is that India is a masculine country. For Indian respondents showing a photo of the analyst has a strengthened effect on the respondents.

Given that India a masculine country, the respondents do follow advice given from female analyst (Table 7). As seen before with the control variables (table 5), Indian respondents value knowledge. A possible explanation could be that Indians have the impression that the female analysts are capable of giving well-balanced advice. However the effects are much stronger if the analyst is a male. For the sell side, the only variable, which is significant, is male text scenario.
The conclusion for the Indian dataset is that Indians do value the addition of a photo of the analyst. The photo strengthens the inclination of the Indian respondents to follow the buy recommendation, for male as well as for female analyst. However Indian respondents are more inclined to follow advice in general, which is provided by a male analyst, especially when a photo is involved.

Table 6: Photo effect on buy/sell scenario

	Buy		Sell	
	Regression (4)	Regression (5)	Regression (4)	Regression (5)
Text	0,106		0,049	
	(1,84)		(0,80)	
Photo	0,181		-0,01	
	(3,13)**		(0,16)	
Text x fem.analyst		0,1762		-0,0507
		(2,55)**		(0,69)
Text x male.analyst		0,1541		0,1492
		(1,18)		(1,01)
Photo x fem.analyst		0,1394		-0,0763
		(1,97)*		(1,04)
Photo x male.analyst		0,2238		-0,0734
		(3,14)**		(1,01)
Constant	0,522	0,522	0,448	0,4478
	(12,74)**	(12,71)**	(10,36)**	(10,46)**
Observations	410	410	410	410
R-squared	0,03	0,03	0,01	0,02

The table shows estimation results of equation 4, and 5. In equation 4 the photo effect is tested, and in Equation 5 the photo effect is tested, when the gender effects are included.
The equation are executed for the buy and sell scenario.
The list of definitions from the variables can be found in Appendix 3.
Absolute value of t-statistics in parentheses
* Significant at 5%; **Significant at 1%

Table 7: Photo effect on buy/sell scenario per country

	Buy		Sell	
	Dutch	Indians	Dutch	Indians
Text x fem.analyst	0,3258	0,1195	-0,0055	-0,0629
	(2,67)**	(1,45)	(0,04)	(0,71)
Text x male.analyst	-0,0595	0,2563	0,0708	0,1868
	(0,48)	(3,02)**	(0,53)	(2,08)*
Photo x fem.analyst	0,0357	0,1925	-0,1313	-0,0473
	(0,28)	(2,27)*	(1,03)	(0,53)
Photo x male.analyst	-0,0278	0,328	-0,0791	0,1384
	(0,21)	(3,92)**	(0,59)	(1,58)
Constant	0,583	0,489	0,479	0,4302
	(8,52)**	(9,68)**	('6,59)**	(8,07)**
Observations	130	280	130	280
R-squared	0,07	0,06	0,02	0,04

The table shows estimation results equation 5. In equation 5 the photo effect is tested when the gender effects are included.
The equations are executed for the buy and sell scenario.
The list of definitions from the variables can be found in Appendix 3.
Absolute value of t-statistics in parentheses
* Significant at 5%; **Significant at 1%

H6. Conclusion

This paper presents evidence how gender can influence the decision to follow a buy or sell recommendation from a professional analyst. This research also shows how much affect a photo of the analyst has on the respondents. Firstly the gender effects will be discussed, second the photo effect.

The gender effects of analyst differ for The Netherlands and India. Dutch respondents are following advice that is given by female analyst more than Indian respondents. Here the effect for Dutch respondents was positive and statistically significant, were the effect for Indians was negative and statistically significant. Due to the negative effect, Indians are less inclined to follow buy advice that is given from female analyst. This is also in line with the masculinity index of the cultural dimension of Geert Hofstede. In the masculinity index The Netherlands has a score of 14 on a scale of 100, according to the index this means that the Dutch society is feminine. Due to the feminine society, Dutch respondents are more likely to follow advice given from female analyst. India has a score of 56 on a scale of 100 in the masculinity index, which is classified as a masculine society. This is also reflected in this study that Indians are more likely to follow advice provided by male analyst.

In the dataset of The Netherlands and India combined I found photo effects, which were statistically significant. Here the textual scenario had a positive relationship with the buy scenario, however this effect was not statistically significant. When the gender effect was included in the photo scenario significant effects were found for the male as well as for the female analysts. However I also found statistically significant effect for the female textual scenario. This female textual effect was caused due to the Dutch respondents. Dutch respondents are more inclined to follow textual but scenarios than Indian respondents. For India we found significant effect for the photo scenarios.

This research could have influence on how financial companies e.g. investment banks advice their customers, especially when the financial companies get a fee when a customer follow his or her recommendation. Therefore this research can have a great impact on their business model. Due to this research I can conclude that financial companies should provide the gender as well as the photo of the professional analyst when they provide a recommendation.

H7. Limitations

This paper presents evidence how gender or culture can influence the decision to buy or accept financial advice from professional analysts.

We should take in consideration that all Indians respondents are expats and, which might cause different results than if you would take data from Indians in India. Also, the study focuses on only the relatively highly educated Indians are among the survey. Therefore the results could give a total different picture than if we would conduct the same survey again with a wider sample of respondents. Also we considered that there would be bigger differences between Indian and Dutch respondents in how they view the financial analyst. Looking at Geert Hofstede we would say that the gap between Male and Female in India would be much bigger than in The Netherlands. This is not the case. Partially, this could be explained due to the fact that only expats are being interviewed. It is likely that these expats are working in internationally companies were the western values are being considerate as standard. What we do see is that Indians value male analyst much more than their female competitors, unsurprisingly so. Also the average age of Dutch people are very low in comparison with the Indians. Many of the Dutch respondents are students were interviewed also this could give a completely different data from the survey.

For future investigation we would conduct experiments instead of only surveys where we could go more in to why people are buying when a photo is shown.

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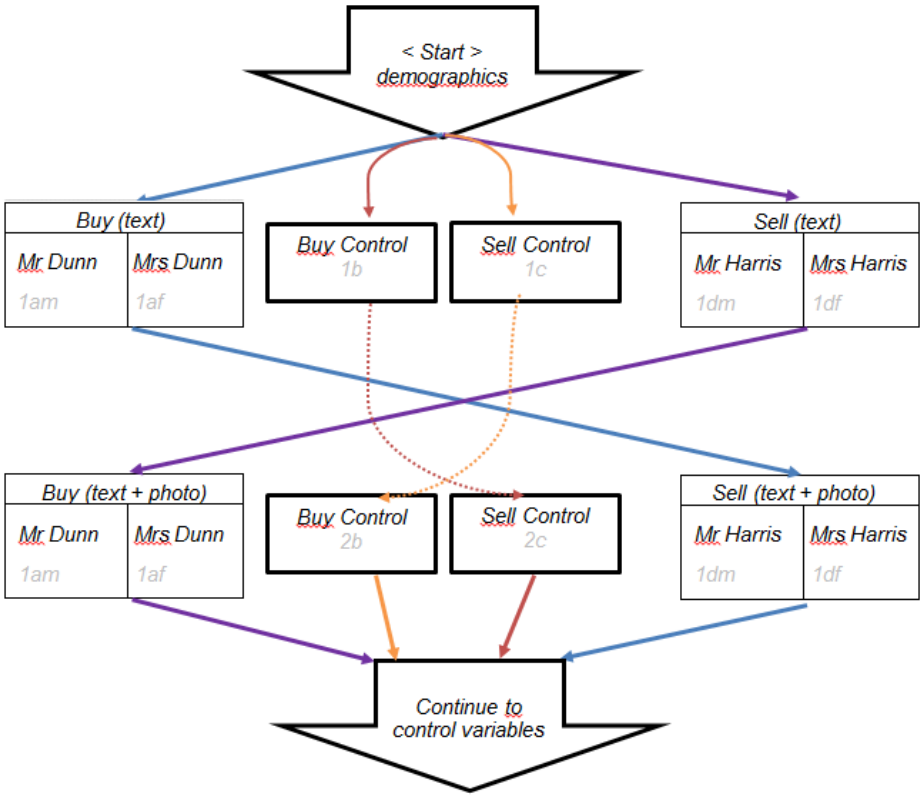
Appendix 1: set up of the survey



Appendix 2: Survey

Intro

Q1

Dear participant,

Thank you for participating in this survey. The results of this survey will be used to investigate investment decisions of consumers.

Making investment decisions partly depends on your financial literacy (financial knowledge), risk aversion and cognitive skills. Therefore, this survey contains questions about these aspects.

The survey consists of the following parts:

Part 1: Demographic questions
Part 2: Risk aversion questions
Part 3: Cognitive skills questions
Part 4: Financial literacy questions
Part 5: The investment decisions
Part 6: Concluding questions

Please take your time to answer the questions and answer the questions as complete as possible, and be honest. There are no right or wrong answers, just your personal opinion counts. The results will be treated anonymously. The survey will take about 15 minutes.

By participating in this survey you have the chance to earn a coupon of €10, there are a total of 5 coupons to be divided among all the participants.

Thank you for your participation,

Eline Veugen, Jeroen Smeekens & Yanick Jessurun

Page Break

Q2

Part 1: Demographic questions
In this part of the survey basic information will be asked such as gender and age. In this way we get insights into the composition of the participants of this survy.

Page Break

Q3

What is your nationality?

Q4

What is your gender?

- Male
- Female

Q5

What is your age?

Q6

What is your marital status?

- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

Q7

What is the highest degree or level of school you have completed? *If currently enrolled, highest degree received.*

- No schooling completed
- Primary school
- Some high school, no diploma
- High school diploma
- College degree (including MBO, HBO)
- Bachelor's degree
- Master's degree or higher degree

Q8

What are you studying? Or what did you study?

What is the highest degree or level of school ***your mother*** has completed? *If currently enrolled, highest degree received.*

- No schooling completed
- Primary school
- Some high school, no diploma
- High school diploma
- College degree (including MBO, HBO)
- Bachelor's degree
- Master's degree or higher degree

Q10

What is the highest degree or level of school ***your father*** has completed? *If currently enrolled, highest degree received.*

- No schooling completed
- Primary school
- Some high school, no diploma
- High school diploma
- College degree (including MBO, HBO)
- Bachelor's degree
- Master's degree or higher degree

Page Break

Part 2 risk-aversion questions

Q11

Part 2: Risk aversion
Now questions will follow about how much risk you are willing to take when making decisions.

Page Break

Q12

Suppose that you are the only person in the family who provides an income. You have a good job that can provide a sufficient income for your family.

You are offered a new equivalent job. However, there is a 50% probability that the income from the new job will be:

doubled compared to your current (family) income
or
reduced by a third compared to your current (family) income

Would you accept the new job?

- Yes
- No

Page Break

Q13

Display This Question:
If Suppose that you are the only person in the family who provides an income. You have a good job th **Yes**Is **Selected**

Suppose that you are the only person in the family who provides an income. You have a good job that can provide a sufficient income for your family.

You are offered a new equivalent job. However, there is a 50% probability that the income from the new job will be:

doubled compared to your current (family) income
or
reduced by half compared to your current (family) income

Would you accept a new job?

- Yes
- No

Q14

Display This Question:
If Suppose that you are the only person in the family who provides an income. You have a good job th **Yes**Is **Not Selected**

Suppose that you are the only person in the family who provides an income. You have a good job that can provide a sufficient income for your family.

You are offered a new equivalent job. However, there is a 50% probability that the income from the new job will be:

doubled compared to your current (family) income
or
reduced by a fifth compared to your current (family) income

Would you accept a new job?

- Yes
- No

Part 3 cognitive questions

Q15

Part 3: Cognitive questions
Now questions will be asked that assess your cognitive abilities.
Cognitive skills have to do with the extent to which you are able to absorb knowledge and process information.

Page Break

Q16

Identify the missing number at the end of the following series: 3, 11, 19, 27, ?

Q17

If it takes 5 minutes for 5 machines to produce 5 products. How many minutes does it takes for 100 machines to produce 100 products?

Q18

A part of a lake is covered with water lilies. Every day the bunch of water lilies doubles in size. If it takes 48 days to cover the entire lake with water lilies, how many days will it take to cover half the lake?

Part 4 financial literacy questions

Q19

Part 4: Financial literacy

Now questions will be asked that estimate your financial literacy. Financial literacy, knowledge of financial concepts and risks, as well as the skills to apply this knowledge to make effective decisions across a range of financial contexts.

Page Break

Q20

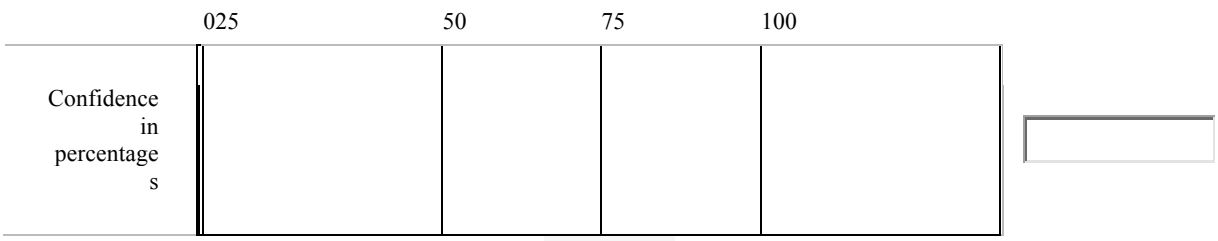
Suppose you have € 100 in a savings account. The interest rate is 2% per year. How many euro will be on your account after 3 years.

- More than 102 euro
- Exactly 102 euro
- Less than 102 euro
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Suppose you have € 100 in a savings a** Skip Logic

Q21

How confident are you that you have given the right answer?



Page Break

Q22

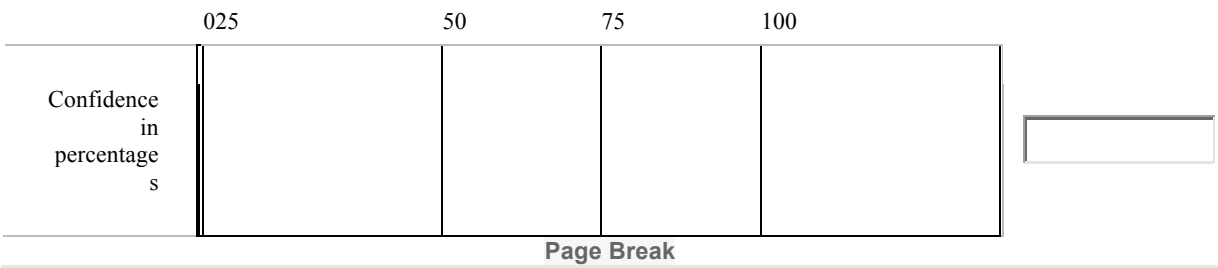
Suppose you have € 100 in a savings account. The interest rate is 20% per year. How many euro will be on your account after 5 years.

- More than 200 euro
- Exactly 200 euro
- Less than 200 euro
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Suppose the interest rate on your sav** Skip Logic

Q23

How confident are you that you have given the right answer?



Page Break

Q24

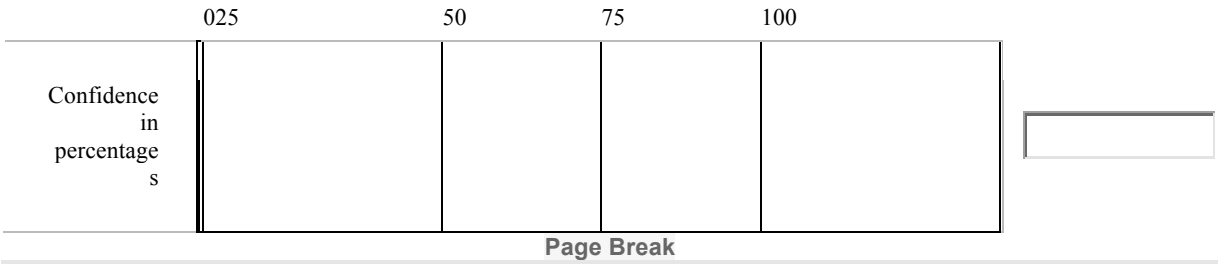
Suppose the interest rate on your savings account is 2% per year. Inflation is equal to 3% per year. Can you, after one year, exactly buy the same, more or less than today with the money in the account?

- More than today
- Exactly the same as today
- Less than today
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Suppose Nicole today inherits € 5,000** Skip Logic

Q25

How confident are you that you have given the right answer?



Page Break

Q26

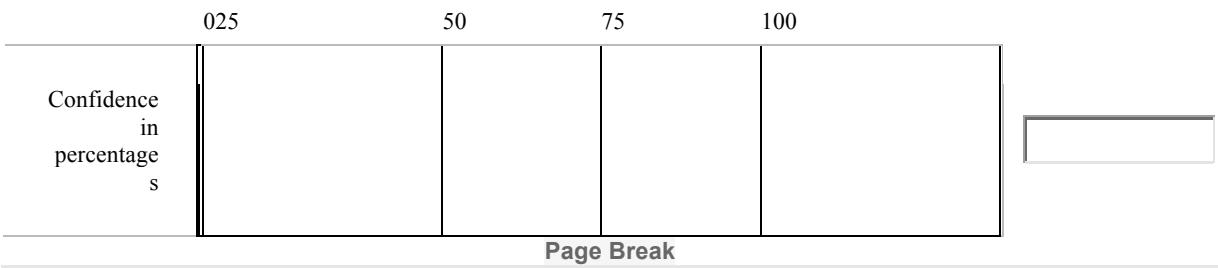
Suppose Nicole today inherits € 5,000. Her sister Anne will, for sure, receive € 5,000 in 4 years.
Which one of the two is richer ?

- Nicole
- Anne
- Nicole en Anne are equally rich
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Suppose your income in the year 2020** Skip Logic

Q27

How confident are you that you have given the right answer?



Page Break

Q28

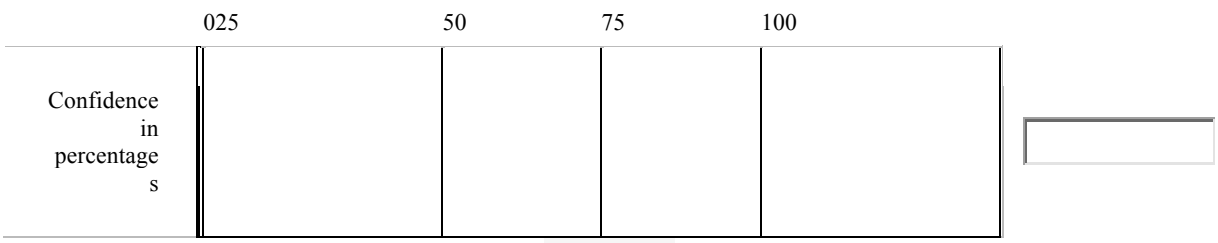
Suppose your income in the year 2020 has doubled compared to today. The prices of all goods are also doubled compared to today. In 2020, are you able to buy more, less or the same, compared to your situation today?

- More than today
- Exactly the same as today
- Less than today
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Consider the statement below. In norm** Skip Logic

Q29

How confident are you that you have given the right answer?



Page Break

Q30

Consider the statement below.

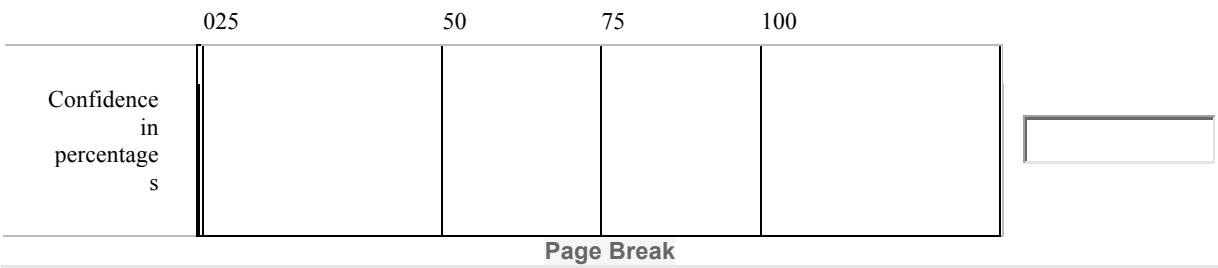
In normal circumstances, a stock of a company is less risky return than an investment in a mutual fund.

- The statement is correct
- The statement is not correct
- I do not know

If **I do not know** Is **Selected**, Then Skip To **What happens to the prices of bonds i** Skip Logic

Q31

How confident are you that you have given the right answer?



Page Break

Q32

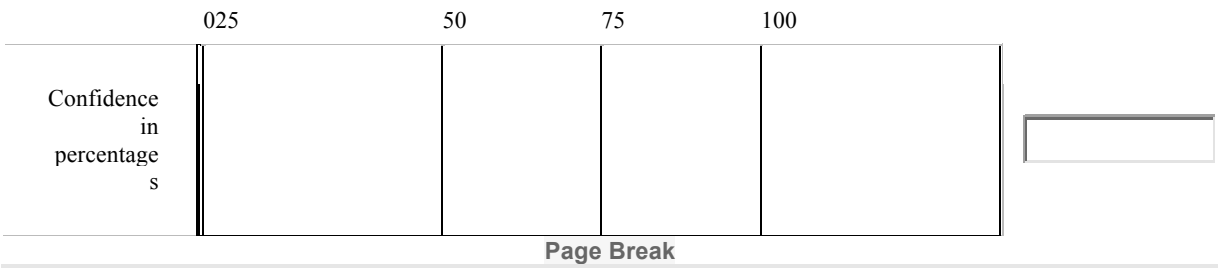
What happens to the prices of bonds if interest rates decrease?

- The prices of bonds will decrease
- The prices of the bonds will increase
- The prices of bonds will remain the same
- There is no relationship between bond prices and interest rates
- I do not know

If **I do not know** Is **Selected**, Then Skip To **Financial literacy varies from person** Skip Logic

Q33

How confident are you that you have given the right answer?



Page Break

Q34

Financial literacy varies from person to person. How do you value your **father's** financial literacy?

Very low	Low	Average	High	Very high	I do not know

Q34

Financial literacy varies from person to person. How do you value your **mother's** financial literacy?

Very low	Low	Average	High	Very high	I do not know

Q35

Financial literacy varies from person to person. How do you value your **own** financial literacy?

Very low	Low	Average	High	Very high	I do not know
○	○	○	○	○	○

Page Break

Part 5 Investment decisions

Q36

Part 5: Investment decisions

Now some questions will follow to see how respondents make investment decisions based on the given financial data.
We do not give true company names because we do not want you to make a decision because of familiarity with the company.

1 Am - Scenario 1 Buy Male Text

1am

Company ABC is a leading company in the medical technology sector.
The firm is engaged in the development, manufacture, and sale of medical devices and instruments.
It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.
The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven to give more return than its competitors over the last year.

Suppose that a financial analyst, Mr. Dunn, advises you to buy the stock.
What will you do?

- ○ Follow the advice, so buy the stock
- ○ Don't follow the advice, so don't buy the stock

If **Follow the advice, so buy t** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-1am

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

Investment horizon

	05	10	15	20	
Numbers are in					

Investment horizon

	05	10	15	20
years				

1 Af - Scenario 1 Buy Female Text

1Af

Company ABC is a leading company in the medical technology sector. This firm is engaged in the development, manufacture, and sale of medical devices and instruments. It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.
The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven to give more return than its competitors over the last year.

Suppose that a financial analyst, Mrs. Dunn, advises you to buy the stock.
What will you do?

- Follow the advice, so buy the stock
- Don't follow the advice, so don't buy the stock

If **Follow the advice, so buy t** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-1af

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

Investment horizon

	05	10	15	20
Numbers are in years				

1 Bc – Scenario 1 Buy

1b

Company ABC is a leading company in the medical technology sector.
The firm is engaged in the development, manufacture, and sale of medical devices and instruments.
It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.

The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven to give more return than its competitors over the last year.

Suppose that a financial analyst advises you to buy the stock.
What will you do?

- Follow the advice, so buy the stock
- Don't follow the advice, so don't buy the stock

If **Follow the advice, so buy t** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-1b

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

	05	10	15	20	
Numbers are in years					

1 Cc - Scenario 1 Sell

1Cc

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price-Earnings ratio of 20.9 is slightly less than its competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don't follow the advice, so don't sell the stock

1 Dm - Scenario 1 Sell

1 Dm

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price- Earnings ratio of 20.9 is slightly less than the competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst, Mr. Harris, advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don’t follow the advice, so don't sell the stock

1 Df - Scenario 1 Sell

1 Df

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price-Earnings ratio of 20.9 is slightly less than its competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst, Mrs. Harris, advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don’t follow the advice, so don't sell the stock

2 Df - Scenario 2 Sell

2Df

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price-Earnings ratio of 20.9 is slightly less than its competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst, Mrs. Harris, advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don’t follow the advice, so don't sell the stock

2 Dm - Scenario 2 Sell + Photo

2Dm

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price-Earnings ratio of 20.9 is slightly less than its competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst, Mr. Harris, advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don’t follow the advice, so don't sell the stock

2 Cc - Scenario 2 Sell

2CC

Consider a public traded company in the consumer goods sector which has sales and production offices in several countries. The company produces various products such as food, drinks and health products.

The stock price of the company has decreased with 0.09% over the last year. The return on this stock is slightly lower than its competitors. Also the Price-Earnings ratio of 20.9 is slightly less than the competitors. The average yield over the last 5 years was 3.60%.

Suppose that a financial analyst advises you to sell the stock.
Suppose you own this stock, what will you do?

- Follow the advice, so sell the stock
- Don’t follow the advice, so don't sell the stock

2 Bc – Scenario 1 Buy

2BC

Company ABC is a leading company in the medical technology sector.
The firm is engaged in the development, manufacture, and sale of medical devices and instruments.
It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.
The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven to give more return than its competitors over the last year.

Suppose that a financial analyst advises you to buy the stock.

What will you do?

- Follow the advice, so buy the stock
- Don't follow the advice, so don't buy the stock

If **Follow the advice, so buy t** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-2Bc

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

Investment horizon

	05	10	15	20	
Numbers are in years					

2 Af - Scenario 1 Buy Female Text + Photo

2Af

Company ABC is a leading company in the medical technology sector.
The firm is engaged in the development, manufacture, and sale of medical devices and instruments.
It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.
The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven

to give more return than its competitors over the last year.

Suppose that a financial analyst, Mrs. Dunn, advises you to buy the stock.
What will you do?

- Follow the advice so buy the stock
- Don't follow the advice so don't buy the stock

If **Follow the advice so buy th** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-2af

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

Investment horizon

	05	10	15	20	
Numbers are in years					

2 Am - Scenario 1 Buy Male Text + Photo

2Am

Company ABC is a leading company in the medical technology sector.
The firm is engaged in the development, manufacture, and sale of medical devices and instruments.
It is a large company with sales offices and research centers all over the world.

The stock price of the company has increased by 1,69% over the last quarter.
The firm has a Price-Earnings ratio of 26.09 (which is higher than the average competitors) and has proven to give more return than its competitors over the last year.

Suppose that a financial analyst, Mr. Dunn, advises you to buy the stock.
What will you do?

- Follow the advice, so buy the stock
- Don’t follow the advice, so don’t buy the stock

If **Follow the advice, so buy t** Is **Not Selected**, Then Skip To **End of Block** Skip Logic

H-2Am

You indicated that you will follow the advice and buy the stock, for how many years would you like to invest in the stock?

Investment horizon

	05	10	15	20	
Numbers are in years					

Part 6 Controls

Q95

Part 6: Concluding questions

Now some questions will follow about your perception of financial analysts

Control Variables F

Page Break

Q96

Consider the following financial analyst:

How much do you agree with the following statements:

"I believe that this person takes a lot of risk"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q97

"I believe that this person knows a lot about finance"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q98

"I believe that this person is conservative"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q99

"I believe that this person can be trusted"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q100

"I believe that this person is focused on the long term"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q101

"I believe that this person is attractive"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Control variable M

Page Break

Q131

Consider the following financial analyst:

How much do you agree with the following statements:

"I believe that this person takes a lot of risk"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q132

"I believe that this person knows a lot about finance"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q133

"I believe that this person is conservative"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q134

"I believe that this person can be trusted"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q135

"I believe that this person is focused on the long term"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Q136

"I believe that this person is attractive"

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Email

Q150

Thank you again for participating in this survey. If you would like to participate in the drawing for the coupon price, please fill in your email address below:

Appendix 3: list of variables

Name of variable	Description	Coding
Nat_NL	If nationality of respondent is Dutch	1 if yes, 0 if no
Nat_IN	If nationality of respondent is Indian	1 if yes, 0 if no
Nat_TH	If nationality of respondent is Thai	1 if yes, 0 if no
Gen_res_dum_m	If gender of the respondent is male	1 if yes, 0 if no
Gen_res_dum_f	If gender of the respondent is female	1 if yes, 0 if no
age	Age of respondent	Number entry
own_educ_level	Education level of respondent	1 = No schooling completed 2 = Primary school 3 = Some high school, no diploma 4 = High school diploma 5 = College degree (including MBO, HBO) 6 = Bachelor's degree 7 = Master's degree or higher degree
study_mother	Study level of mother of respondent	same as own_educ_level
study_father	Study level of father of respondent	same as own_educ_level
FinLit_fath	Financial literacy level of father	score from 1 (lowest) - 7 (highest)
FinLit_moth	Financial literacy level of mother	score from 1 (lowest) - 7 (highest)
FinLit_own	Own financial literacy level	score from 1 (lowest) - 7 (highest)
Buy_follow	If respondent follows the buy advice	1 if yes, 0 if no
Sell_follow	If respondent follows the sell advice	1 if yes, 0 if no
Buy_yes_from_fem_scen	If participant followed female analyst	1 if yes, 0 if no
Buy_yes_from_mal_scen	If participant followed male analyst	1 if yes, 0 if no
Fem_risk	Perceived level of risk taking of female	score from 1 (lowest) - 6 (highest)
Fem_knows	Perceived level of knowledge of female	score from 1 (lowest) - 6 (highest)
Fem_cons	Perceived level of conservativeness of female	score from 1 (lowest) - 6 (highest)
Fem_trust	Perceived level of trustworthiness of female	score from 1 (lowest) - 6 (highest)
Fem_attrac	Perceived level of physical attractivenessof female	score from 1 (lowest) - 6 (highest)
Male_risk	Perceived level of risk taking of male	score from 1 (lowest) - 6 (highest)
Male_knows	Perceived level of knowledge of male	score from 1 (lowest) - 6 (highest)
Male_cons	Perceived level of conservativeness of male	score from 1 (lowest) - 6 (highest)
Male_trust	Perceived level of trustworthiness of male	score from 1 (lowest) - 6 (highest)
Male_attrac	Perceived level of physical attractivenessof male	score from 1 (lowest) - 6 (highest)
cogscore	Cognitive score of participant	score from 0 (lowest) - 3 (highest)
finlitscore	Financial literacy score of participant	score from 0 (lowest) - 7 (highest)

RA	Risk aversiness level of participant	score from 0 (lowest) - 3 (highest)
RA_x_femresp	Risk aversiness level of female participant	score from 0 (lowest) - 3 (highest)
RA_x_maleresp	Risk aversiness level of male participant	score from 0 (lowest) - 3 (highest)
Fanalyst_b	Female analyst in buy scenario	1 if yes, 0 if no
Fanalyst_s	Female analyst in sell scenario	1 if yes, 0 if no
Manalyst_buy_dum	Male analyst in buy scenario	1 if yes, 0 if no
Manalyst_sell_dum	Male analyst in sell scenario	1 if yes, 0 if no
Buy_Text_scen_dum	If scenario was a buy text scenario	1 if yes, 0 if no
buy_Pho_scen_dum	If scenario was a buy photo scenario	1 if yes, 0 if no
Sell_Text_scen_dum	If scenario was a sell text scenario	1 if yes, 0 if no
Sell_Pho_scen_dum	If scenario was a sell photo scenario	1 if yes, 0 if no
B_Text_only	If buy scenario was a text scenario	1 if yes, 0 if no
Control	If scenario was a control scenario	1 if yes, 0 if no
NL_x_Fanalyst	If there was a female analyst and a Dutch participant	1 if yes, 0 if no
TH_x_Fanalyst	If there was a female analyst and a Thai participant	1 if yes, 0 if no
IN_x_Fanalyst	If there was a female analyst and an Indian participant	1 if yes, 0 if no
b_text_x_fem	If it was a buy text scenario with a female analyst	1 if yes, 0 if no
b_text_x_male	If it was a buy text scenario with a male analyst	1 if yes, 0 if no
b_pict_x_fem	If it was a buy photo scenario with a female analyst	1 if yes, 0 if no
b_pict_x_male	If it was a buy photo scenario with a male analyst	1 if yes, 0 if no
buytextnl	If it was a buy text scenario with a Dutch participant	1 if yes, 0 if no
buytextindia	If it was a buy text scenario with an Indian participant	1 if yes, 0 if no
buytextthai	If it was a buy text scenario with a Thai participant	1 if yes, 0 if no
buyphotonl	If it was a buy photo scenario with a Dutch participant	1 if yes, 0 if no
buyphotoindia	If it was a buy photo scenario with an Indian participant	1 if yes, 0 if no
buyphotothai	If it was a buy photo scenario with a Thai participant	1 if yes, 0 if no