Are female investors driven differently by sentiments than male investors?

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Abstract

In this study we will look at gender differences in sentiment driven investing. It extends a study by Kaplanski et al. [15] on the influence of sentiment on risk and return expectations and future trading plans. The gender differences in risk and return expectations and trading plans are researched, as well as the gender differences in sentiment and sentiment-creating factors. Lastly, we have also researched the influence of a sentiment index, consisting of a linear combination of the sentiment-creating variables, on the risk and return expectations and trading plans for men and women separately. We find that men expect higher returns and a lower volatility than women and that men trade more. We also find that men and women have no difference in their general feeling and weather perception. They do however differ in the fact that men have a favorite sports team more often than women and that men suffer less from Seasonal Affective Disorder (SAD) than women. When examining the relationship between sentiment and investing for men and women with the sentiment index, we find no significant relation between sentiment and expected risk and return. We do find gender differences in sentiment driven trading plans, more positive sentiment directs women more towards buying instead of selling than men.

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Chapter 1

Introduction

The main objective of this research is to extent the study of Kaplanski et al. [15] with a gender aspect. Several authors have studied influences of investors' feelings on their risk and return expectations but, in this study, we will look at how different investors are influenced differently by these feelings. With different investors we here mean male and female investors.

In the study of Kaplanski et al. [15] the influences of sentiment on investors' return and risk expectations where studied. They analyzed sentiment using five proxies: the individual's contemporaneous feeling, recent results of their favorite soccer team, perception of the contemporaneous weather and whether the individual is "a spring person" in general and suffers from Winter Blues. They find that sentiment-creating factors systematically affect return and risk expectations, where the return effect is more profound. The happier the subject, the more optimistic he is with regard to the stock market and that the better the general mood of the individual the better the perceived weather, and the better the perceived results of the individual's favorite soccer team. Our study relies on the data gathered in this study and the data comes from the Longitudinal Internet Studies for the Social Sciences (LISS) panel of CentER data at Tilburg University.

In this study we research what influence gender has on how investors are affected by sentiment. First, we look at the difference between males and females in investing and in sentiment. According to previous literature [10],[4] and [22] women are more driven by sentiments than men. From the Kaplanski et al. study we know that sentiment influences investors' risk and return preferences. There has not been a lot of research into the sentiment-gender interaction combined with investment decisions. Therefore we want to study how males and females let sentiment-creating factors influence their subjective market judgment regarding expected risk and return differently.

This study is divided into two parts. A descriptive and an econometric analysis. In the descriptive analysis we study the gender differences in risk and return

expectations and in sentiment-creating factors separately. In the econometric analysis part, we study the influence of a sentiment index (created from the sentiment-creating factors) on the risk and return expectations of men and women separately, and compare these results.

We hypothesize that men expect higher returns than women and we find that this is consistent with our results. Our hypothesis that men expect a lower volatility than women is not consistent with our results. We find no difference in the risk expectations of men and women. Consistent with our hypothesis men do trade more than women, but men and women are not differently directed towards buying or selling more stock. Based on our literature study, we hypothesized that men would report a better general feeling than women, but we found no difference in the general feeling of men and women. Our hypothesis that men have a favorite sports team more often than women and that the distribution between good and bad performances of sports teams (as judged by the individual) is the same for men and women is consistent with our results. We expected that men would have a more positive weather perception than women, but our results show no gender difference in weather perception. Our expectation that men suffer less from Seasonal Affective Disorder (SAD) than women was confirmed by our results. In the econometric analysis part we hypothesized that sentiment would have a smaller influence on expected return and risk for men than for women. We found that this is not true, because sentiment has in most cases no influence on expected risk and return. In this part we also hypothesized that sentiment of men would have a larger influence on their investment plans than that of women. We found that sentiment does not have a significant influence on trading plans. We did however find that sentiment has a more towards buying (instead of selling) directed influence on trading plans for women than for men.

The remainder of this paper is organized as follows. Section 2 reports on literature about the difference in investor trading behavior between men and women. Section 3 presents the data and the sample. Section 4 explains our hypotheses and the variables used to test them and section 5 reports our testing methods. In section 6 we will present our results and discuss them. Finally, in section 7 we will conclude.

Chapter 2

Related literature

In this chapter an overview of present literature on the subject of gender differences in sentiment and investor trading behavior will be given. In our research we study the link between gender, sentiments and investment, but since this combination has not been studied much we here look at the link's between each of these. We first look at the gender differences in investing, then at the gender differences in sentiment and finally at the influences of sentiment on investing.

2.1 Gender differences in investor trading behavior

A number of studies examine gender differences in investor trading behavior. According to many studies, women are more risk averse than men in investment decisions. For example Hinz, McCarthy and Turner [13] find that women appear to invest their pension assets more conservatively than men. They tested this using a survey of participants in the federal government's Thrift Savings Plan. A large percentage of women invested in the minimum-risk portfolio available to them. Even after controlling for economic and demographic variables this result persisted. In another study Powell and Ansic [19] examine whether gender differences in risk propensity and strategy in financial decision-making can be viewed as general traits, or whether they arise because of context factors. They find that females are less risk seeking than males irrespective of familiarity and framing, costs or ambiguity. Jianakoplos and Bernasek [14] even wanna go as far as to say that greater financial risk aversion may provide an explanation for women's lower levels of wealth compared to men's. They said this after examining household holdings of risky assets, where they found that as wealth increases, the proportion of wealth held as risky assets is estimated to increase by a larger amount for single men than for single women.

That women appear to be less risk tolerant is closely related to the finding that women are less self confident in their abilities. A study by Beyer [3] found that on a masculine task females underestimated their performance, were less well calibrated, and showed a more conservative response bias than males. However, for feminine and neutral tasks no gender differences in perception were found. This could all be due to the fact that females were more likely than males to recall their mistakes even with performance and accuracy of self-evaluations controlled. Specifying this finding to investing: since women appear to be less risk tolerant investors, are women also less confident in their investment decision-making? Studies have found a lower degree of self confidence amongst women in their ability to make decisions about investment options and in the outcome of these decisions. Estes and Hosseini [7] find that gender is the most important explanatory factor affecting confidence in investment decisions. Females were significantly less confident about their decisions, even after controlling for factors such as age, experience, education, knowledge, and asset holdings. Theoretical models predict that overconfident investors trade excessively. Barber and Odean [2] test this prediction by partitioning investors on gender. They hypothesize that men will trade more excessively than women, since according to psychological research men are more overconfident than women in areas such as finance. Barber and Odean find that men indeed trade more excessively than women, they even trade 45 percent more. They also find that married couples inuence one anothers investment decisions, thereby reducing the effects of gender differences in overconfidence.

According to the same paper by Barber and Odean [2] women's tendency to put more thought into investment decisions results in a higher rate of return, because of the lower trade rate. However, Graham et al. [11] argue that women's tendency to take less investment risk leads to lower investment returns. They refer to past research regarding gender differences in investment strategies which pointed to two results: female investors appear to be more risk averse and to have less confidence in their investment decisions than men. They propose that gender differences in information processing styles may account for the lower risk-taking tendencies among female investors as well as the tendency towards lower confidence levels.

Other studies found that gender was not a critical determinant of investment choice. Embrey and Fox [6] found that women were more likely to hold risky assets if expecting an inheritance, when employed and when holding higher net worth. Men, on the other hand, were more likely to invest in risky assets of they were risk seekers, were divorced, were older or were college educated. In this study gender was not the critical determinant of investment choice. Dwyer et al. [5] find that women do exhibit less risk-taking in their most recent, largest and riskiest mutual fund investment decisions than men. However, they also find that the impact of gender on risk taking is significantly weakened when using investor knowledge of

financial markets and investments as a control variable in the regression. So the gender difference is weak for men and women with the same amount of knowledge about investing.

There are a lot of studies done on gender differences in investor trading behavior. There however are not a lot of studies on combinations of gender, sentiment and investing. We have found one study which combines gender, optimism and investment. Felton et al. [8] examine the role of gender and optimism on the riskiness of investment choices of students. The data suggest that males make more risky investment choices than females, but also that this difference was primarily due to the riskier choices of optimistic males. Therefore their results suggest that the gender difference in investment strategies of men and women may be due to a specific subgroup of males (optimists). Our extension of the study of Kaplanski et al. also takes this optimist subgroup into account.

2.2 Gender differences in sentiment

We now know that many studies find that women are more risk-averse and less self confident in their abilities than men. In this study we are interested in whether this could be due to sentiments. Are women, for example, more prone to the impact of sentiment-creating factors? And are women more inclined to let their judgments be influenced by feelings?

Several studies show that women experience emotions more intensely than men. A study by George [10] using positron emission tomography (PET) scans shows that when male and female individuals are asked to recall their saddest memory, brain activity increases significantly more in female brain than in the male brain. Female subjects are also significantly more confident in expressing fear and sadness than male individuals according to Blier and Blier-Wilson [4]. However a study by Simon and Nath [22] suggests that men report positive feelings significantly more often than women. The emotions of fear and sadness in the other papers are also rectified here: women report negative feelings significantly more often than men. This might be the cause of optimism among men and risk intolerance of women. It implies that men might positively estimate their expected return and women might expect a higher than average risk when investing.

2.3 The influence of sentiment on investment

The study which is extended in this paper, by Kaplanski et al., researches the influence of sentiment on investment. They have found that sports results, general feelings and Seasonal Affective Disorder (SAD) significantly affect predictions

about the stock market. The return effect is most pronounced, but also risk expectations and investment plans are influenced. To generalize their sentiment results Kaplanski et al. replace the various sentiment-creating factors by an Investor Sentiment Index (ISI). This index was constructed from the first principal components of the correlation matrix of the sports results, general feeling and SAD variables, found to have a significant effect on expected return. They find that the higher the ISI (and thus the more positive the sentiment), the higher the return expectations and that a higher ISI tends to lower risk expectations, but this last result is not significant. They also find that more positive sentiment increases individuals' intentions to buy rather than to sell stocks. Loewenstein et al. [17] propose a risk-as-feelings hypothesis, which highlights the role of affect experienced at the moment of decision making. Using other psychological studies they show that emotional reactions to risky situations do not correspond with cognitive assessment of those risks. When this happens emotional reactions drive behavior. A study by Fisher and Statman [9] shows a negative relationship between sentiment and future stock returns, which is statistically significant for Wall Street strategists and individual investors.

Summarizing the studied literature we find that there are gender differences in investor trading behavior and gender differences in sentiment and that sentiment influences investment. Combining these findings, it could be that gender differences in trading behavior are explained by their differences in sentiment or that sentiment influences men into other investment decisions than women. These links will be studied further in this paper.

Chapter 3

Data and sample

Our dataset is the same as the one used in the study of Kaplanski et al. [15], since we want to extent this study. The data is collected from the LISS panel (Longitudinal Internet Studies for the Social sciences). The LISS panel is a randomly drawn sample of people living in the Netherlands. In order to focus on individuals who actually invest, 7428 members of the panel were asked whether they invested in stocks. Only the 929 individuals that did invest were approached with questionnaires for this study. These individuals were approached with questionnaires in three waves, in November 2010, February 2011 and June 2011. 808 individuals submitted a complete questionnaire in at least one of these waves. Next to the questionnaire answers we also have access to demographic characteristics of the participants, like age category, gender and education. In Table 3.1 the sample characteristics can be found. The table reports the sample size, number of completed questionnaires and number of people of which the gender is known, which leads to our total usable sample size. From the 808 individuals that filled in the questionnaire at least once, there are 510 males and 298 females. So there are enough subjects in both categories to be able to perform this gender study. Information about the demographic characteristics of the individuals can be found in 3.2. Here we report characteristics of the 770 people that have completed at least one questionnaire and have filled in all questions about their personal characteristics.

Table 3.1: This table reports the descriptive statistics of the sample population. The number of individuals approached, and the number that filled in the questionnaire in each round is shown. Of the 808 unique individuals that completed the questionnaires 510 are male and 298 are female. This table is based on a table from [15].

The sample population	Total approached[1]	Complete questionnaire	Incomplete questionnaire	No response	Missing gender information	Total usable data
Preliminary screening round:	7428	5316	0	2112		
Held stocks in October 2010		929				
Round 1 in November 2010	929	755	124	50	17	738
Round 2 in February 2011	918	714	108	96	6	708
Round 3 in June 2011	804	612	64	128	0	612
Total in all three rounds	2651	2081	296	274	23	2058[2]

[1] At each round, individuals who did not have stocks were not approached again.

[2] These questionnaires were filled by 808 individuals.

The subjects were approached in waves, with three times the same questionnaire. This questionnaire consisted of three parts. Subjects were asked questions about their past and future investment plans, about their expectations of return and volatility in two stock-market indexes and about the sentiment-creating factors. Table 3.3 reports the descriptive statistics of these variables. In panel A the expectations of the subjects with regard to the stock market and their past and future investment plans can be found. Panel B reports descriptive statistics of the sentiment-creating factors. In the past and future investment plan part subjects were asked about their past and planned investments, however, as can be seen in Table 3.3, in any given month most of the subjects did not trade at all. In the expectations about stock markets part subjects were asked questions about future volatility and return. Their expectations regarding the next month (short term) and next year (long term) volatility and return were asked for both the Amsterdam Exchange index (AEX) and the U.S. S&P500 index. In the sentiment-creating factors part subjects were asked about their contemporaneous general feeling, their perception of the weather over the last three days, whether they generally suffer from Season Affective Disorder (SAD, or Winter Blues), whether they prefer Spring or Autumn and about their favorite sports team's performance. Since the questionnaire was taken in three different moments of the year we can look at seasonal biases. An English version of the questionnaire questions (the questionnaire was taken in Dutch) can be found in Appendix A.1. The multiple choice questions included a wide range of options centered around a neutral option to avoid biases. Some questions also included a 'Don't know/no opinion'-option.

Table 3.2: This table reports the demographic characteristics of the sample population. The sample is composed of 770 individuals who have held stocks in their portfolio, submitted at least one complete questionnaire and of which we have complete personal data. This table is based on a table from [15].

Demographic characteristics

Gender		Partner		Degree of urbanization		Education		Nett income	
Male	487	Yes	588	Very high	98	Primary School	32	No income	35
Female	283	No	182	High	216	High School (vocational)	134	€ 500,00	26
				Moderate	170	High School (general)	84	€ 1.000,00	95
				Low	163	Vocational	131	€ 1.500,00	116
				Not urban	123	College	251	€ 2.000,00	169
						University	138	€ 2.500,00	120
Occupation		**Age**		**Number of children living at home**				€ 3.000,00	102
Employed	350	15-24	20					€ 3.500,00	48
Self-employed	62	25-34	44	0	500			€ 4.000,00	21
Unemployed	63	35-44	100	1	65			€ 4.500,00	9
Student	19	45-54	170	2	136			€ 5.000,00	6
Retired	224	55-64	208	3	61			€ 7.500,00	15
Unfit for work	33	65+	228	4	5			€ 7500+	8
Volunteer	19			5	2				
				6	1				

Table 3.3: This table reports the descriptive statistics of the main variables (financial and emotional) used in this study. The total number of observations from all three rounds is 2058 questionnaires, complete with gender information, which were filled in by 808 individuals. This table is based on a table from [15].

(a) Panel A. Subjective expectations and trading activity

The individuals' belief about future returns and risk

Choice	Next month return expectations: AEX men	AEX women	S&P 500 men	S&P 500 women
1 (-4% or less)	32	18	15	10
2 (-4% to -2%)	61	22	41	26
3 (-2% to 0%)	158	72	161	84
4 (0% to 2%)	531	236	440	161
5 (2% to 4%)	252	82	206	64
6 (4% or more)	71	23	62	17
Total valid	1105	453	925	362
Don't know	219	281	399	372
Total	1324	734	1324	734
Valid choices statistics				
Mean choice	4,02	3,91	4,05	3,81
Median choice	4	4	4	4
Std. Dev.	1,05	1,04	0,99	1,05

Choice	Next year return expectations: AEX men	AEX women	S&P 500 men	S&P 500 women
1 (-15% or less)	4	2	2	1
2 (-15% to -10%)	5	3	8	4
3 (-10% to -5%)	16	10	22	11
4 (-5% to 0%)	90	45	123	65
5 (0% to 5%)	612	312	487	216
6 (5% to 10%)	317	78	215	53
7 (10% to 15%)	66	8	49	6
8 (15% or more)	18	3	14	0
Total valid	1128	461	920	356
Don't know	196	273	404	378
Total	1324	734	1324	734
Mean choice	5,31	5,05	5,17	4,89
Median choice	5	5	5	5
Std. Dev.	0,89	0,78	0,95	0,66

Choice	Next month risk expectations: AEX men	AEX women	S&P 500 men	S&P 500 women	Next year risk expectations: AEX men	AEX women	S&P 500 men	S&P 500 women
Much less risky	51	19	60	22	63	17	79	31
Somewhat less risky	261	107	288	108	266	126	265	109
Average risk	560	268	436	184	431	222	372	153
Somewhat riskier	207	71	146	58	328	105	196	73
Much riskier	15	3	8	5	20	4	16	1
Total valid	1094	468	938	377	1108	474	928	367
Don't know	230	266	386	357	216	260	396	367
Total	1324	734	1324	734	1324	734	1324	734
Mean choice	2,88	2,85	2,74	2,78	2,98	2,90	2,79	2,74
Median choice	3	3	3	3	3	3	3	3
Std. Dev.	0,81	0,74	0,83	0,82	0,91	0,81	0,93	0,88

Investment activity

Choice	Past trading men	Past trading women	Future trading men	Future trading women
Only buy	122	45	92	23
Mostly buy	64	13	48	8
Buy and sell	52	14	39	7
Mustly sell	19	6	24	6
Only sell	61	20	32	16
Total valid	318	98	235	60
Not active	1006	636	1089	674
Total	1324	734	1324	734
Mean choice	2,47	2,42	2,39	2,73
Median choice	2	2	2	2
Std. Dev.	1,51	1,59	1,43	1,68

(b) Panel B. Sentiment-creating factors

Sentiment-creating variables

Currently feeling: Choice	men	women	Current weather: Choice	men	women	Winter blues: Choice	men	women
Great	39	23	Very good	65	42	Do not suffer	834	392
Good	665	359	Good	379	199	Mildly suffer	389	270
Normal	558	308	Normal	618	331	Suffer	71	53
Bad	60	39	Bad	243	137	Strongly suffer	30	19
Very bad	2	5	Very bad	19	25	Total	1324	734
Total	1324	734	Total	1324	734			
Valid choices statistics								
Mean choice	2,49	2,51		2,83	2,87		1,47	1,59
Median choice	2	2		3	3		1	1
Std. dev.	0,64	0,68		0,83	0,90		0,70	0,74

Spring-autumn: Choice	men	women	Favorite sports team's performance: Choice	men	women	Optimistic-pessimistic: Choice	men	women
Autumn preference	4	11	Good (important)	106	29	Highly optimist	35	22
	12	6	Good	38	10	Optimist	504	296
	15	8	Neither	59	12	Neither	651	365
Neither	452	249	Bad	18	6	Pessimist	123	48
	262	120	Bad (important)	78	10	Highly pessimist	11	3
	299	136	Total valid	299	67	Total	1324	734
Spring preference	280	204	Didn't play	210	60			
Total	1324	734	Total	509	127			
Mean choice	5,25	5,30		4,09	4,09		2,68	2,61
Median choice	5	5		5	5		3	3
Std. dev.	1,24	1,38		2,02	2,11		0,71	0,67

Chapter 4

Hypotheses

As in the methods chapter, this chapter is also split up into a descriptive and an econometric analysis part. In the descriptive analysis part hypotheses are made about gender differences in all variables. In the econometric analysis part hypotheses are made about how male investors are driven differently by sentiments than female investors.

4.1 Descriptive analysis

We employ sixteen variables to study gender differences in risk and return expectations and sentiment-creating variables. The first three groups of variables represents the subjective expectations and trading activity. The first group explores the return expectations, the second group the risk expectations and the third group the trading activity. The following groups represent the sentiment-creating variables: general feeling, sport team's performance, weather, SAD and optimism.

4.1.1 Return expectation hypothesis

In section 2.1 many studies are stated which have found that women are more risk-averse and are less self-confident in their investment decisions. On the basis of these findings we think that women are less confident about their returns and will expect indexes to have lower expected returns in the future. We think this effect will be larger for less known indexes and for larger time spans.

H1: Men expect higher returns than women, especially for less known indexes and larger time spans.

4.1.2 Risk expectation hypothesis

As for the above hypothesis, we use the findings from our literature study. Women are found to be more risk-averse, and we think that they will therefore expect higher risks on the indexes in the future than men. This effect will be larger for less known indexes and for larger time spans.

H2: Men expect a lower volatility than women, especially for less known indexes and larger time spans.

4.1.3 Trading activity hypothesis

Due the more risk-averse attitude and the less self-confidence in investment decisions of women, we think that women will trade less than men. Barber and Odean [2] found in their study that women have a lower trade rate. We think that men will tend more to buying new stocks and women will tend to selling more stocks they own, because men are more risk-seeking than men.

H3: Men trade more, and are more directed towards buying new stock instead of selling stock they own.

4.1.4 General sentiment effect hypothesis

In section 2.2 we found that other literature suggests that women experience their negative emotions more than men and that men report their positive feelings more often. We therefore think that men will report their general feeling as better than women.

H4: The average man will report a better general feeling than the average woman.

4.1.5 Sports sentiment effect hypothesis

Sargent et al. [21] find that male and female sports spectators enjoy different types of sports. Males mostly like watching sports with athletic confrontations that emphasize combative coordination like football, ice hockey and soccer. Females like watching sports in which stylish movements and gracefulness are shown, like gymnastics, skiing and figure skating. As the 'male' sports are shown on television more often, and there are more of them, we think that males will more often have a favorite athlete or sports team than females. We think that the distribution of good and bad performances, as judged by the individuals, over the last three days of favorite sports team's will be the same for men and women. This because winning and losing is just a matter of chance and winning will be judged as positive by the individuals, whereas losing will always be seen as a bad performance.

H5: Men have a favorite sports team (person) more often than women. The distribution between good and bad performances (as judged by the individuals) will be equal for men and women.

4.1.6 Weather sentiment effect hypothesis

A study on thermal comfort by Karjalainen [16] shows significant gender differences in comfort and temperature preference. Men are more satisfied with room temperatures then women, prefer a lower room temperature than women and feel both uncomfortably warm and uncomfortably cold less than women. This shows that women are more critical of their thermal environments, which is why we think that men will have a more positive weather perception than women.

H6: Men have a more positive weather perception than women.

4.1.7 SAD sentiment effect hypothesis

In a study on Seasonal Affective Disorder in the Netherlands by Mersch et al. [18] it was that shown that SAD is found more often in young women than in men of all ages and older women. We therefore think that in our study women will report to suffer more from SAD.

H7: Men suffer less from SAD than women.

4.2 Econometric analysis

In all of the above hypotheses we studied the gender difference in each of the variables separately. Even when the differences in each variable are small it is possible that the effect in gender difference of all factors together is substantial. To investigate this we create the Individual Sentiment Index (ISI) for men and women separately, and study its influence on expected return, volatility and trading behavior. The ISI employs all significant sentiment-creating factors to construct the single sentiment index.

4.2.1 Overall sentiment effect hypothesis

Now we can test whether the overall sentiment of men has a different influence on their expected returns than women's overall sentiment. In on our literature study, we found that sentiment influences investment and also that women are affected differently by sentiment. This is why we expect women's overall sentiment to have a different effect on investment expectations than men's. According to the study by Simon and Nath [22] men report positive feelings more often and women report

negative feelings more often, but in total women report their feelings more often. We therefore think that the ISI of women will have a greater influence on their expected return and volatility.

H8: The ISI of men has a smaller influence on their expected return and volatility than that of women.

4.2.2 Overall sentiment effect on trading plans hypothesis

We also analyze the past and future trading plans and their relation to sentiment. Since we found in our literature study that women are less self confident about their trading decisions, we think that men would let their own sentiment influence their trading plans faster. That is why we expect that the ISI of men has a larger influence on their trading behavior than that of women.

H9: The ISI of men has a larger influence on their future investment plans than that of women.

Chapter 5

Methods

In this thesis two types of analysis are done to research the gender differences. Descriptive analysis is done in order to examine the gender differences in all variables (financial and emotional) separately. Econometric analysis is done to be able to see if there are gender differences in sentiment driven investing.

5.1 Descriptive analysis

Gender differences are examined for sixteen different variables. These variables include two variables for past and future trading, four variables for return expectations on stock markets, four variables for volatility expectations on stock markets and six sentiment-creating variables. Tests are done on all three waves of questionnaires separately and on the total set.

We wanted to examine whether the groups of males and females responded to the questions in the same way. For comparing the means of the two groups it would be best to use a parametric test. Parametric methods make more assumptions than non-parametric methods, but if those extra assumptions are fulfilled, parametric methods produce more accurate and precise estimates.

The parametric test used here is the independent samples t-test. This test compares the means of two unrelated groups on the same dependent variable. There are six assumptions underlying this t-test:

1. The dependent variable should be measured on a continuous scale (interval or ratio level).

2. The independent variable should consist of two categorical, independent groups.

3. There should be independence of observations. This means that there should

be no relationship between the groups and between the observations in each group.

4. There should be no significant outliers.

5. The dependent variable should be approximately normally distributed for each group of the independent variable.

6. There needs to be homogeneity of variances.

Regarding the first assumption, our variables are all measured on an ordinal scale, but since there are a lot of categories (for some variables up to 9 categories) we treat our data as 'approximately interval scale.' The robustness of the t-test when using ordinal scaled data is researched in [12], were even for small samples the test turned out to perform well. The second and third assumption are in agreement with our data. We have two independent, categorical groups: men and women. There is no relationship between these groups or between the observations in each group. The fourth assumption is fulfilled because of our ordinal scaled data. This does not allow any significant outliers. The fifth assumption is part of an ongoing debate in the social sciences. The independent t-test requires only approximately normally distributed data because it is quite robust, meaning that the statistic has been shown to yield useful results even when the assumption is violated. And, since our sample size is quite large, even with an unknown population distribution, we know that the sampling distribution of the mean will be approximately normally distributed, as proven by the central limit theorem [23]. Regarding the last assumption, when there is homogeneity of variances this specific t-test can be used, but in cases of unequal variances between the two groups a similar t-test, called Welch's t-test can be used. In this t-test the two population variances are estimated separately.

To test if the assumptions of homogeneity of variances and normal distribution are fulfilled we use other statistic tests. For homogeneity of variances the test used is called Levene's test, in which we specifically look at the mean for this study, and if the variances turn out to be unequal we use Welch's t-test. For testing normality we use the Shapiro-Wilk test because it is the most powerful normality test [20]. The normality is tested for both groups and if in one of the two groups or both the data is not normally distributed we still perform the t-test but also some other tests. We compare the t-test results with the other tests to check the robustness of the t-test. The other tests used here, only in case of non-normality, are two non-parametric tests, which therefore do not need the assumption of normality to give valid results. We use the Kolmogorov-Smirnov test and the Mann-Whitney U test. The Kolmogorov-Smirnov test is a common method for comparing two samples, as it is sensitive to differences in location, but also shape of the distribution functions

of the two samples. The Mann-Whitney U test tests whether the two medians of the two groups are equal. Because the Kolmogorov-Smirnov test tests for more deviations from the null hypothesis of identical distributions than does the Mann-Whitney U test, it has less power to detect a shift in the median, but it has more power than the Mann-Whitney U test in detecting changes in the shape of the distributions.

5.2 Econometric analysis

Gender differences in sentiment driven investing are examined by creating an Investor Sentiment Index (ISI), for men and women separately, and testing its influence on expected return. The ISI is a comprehensive measure for sentiment. It is constructed, for men and women separately, as follows:

1. First we regress expected return on the sentiment-creating variables to see which variables have a significant influence.

2. Take those variables that have a significant influence on the expected return and create a correlation matrix with those variables.

3. The ISI now consists of the first principle components of the correlation matrix for these variables.

To examine the effect of the separate sentiment-creating variables on the return expectations of individuals, we run the following ordered probit regression as based on the regression from Kaplanski et al. [15]

$$E(R_{t+1,i}) = \beta_0 + \sum_j \beta_j SENT_{j,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i, \qquad (5.1)$$

where $E(R_{t+1,i})$ is the individuals expected return on the AEX index in the next month, $SENT_{j,i}$ are the sentiment-creating variables and $CONTROLS_{k,i}$ are the control variables. We run this regression for men and women separately. An ordered probit regression is used because the dependent variable is ordinal in nature. In this regression actual values taken on by the dependent variable are irrelevant, but larger values are assumed to correspond to higher outcomes.

The dependent variable in equation (5.1) is the individuals expected return on the AEX index in the coming month, ranging from very low to very high expectations (1-6). If individuals selected option 7 (don't know/ no opinion), they were excluded from the regression to avoid biases.

The sentiment-creating variables implemented here are general feeling, the perceived weather, sport results and SAD. Since we are interested in the influence of

SAD as a function of the year, this variable is divided into three variables: SAD reported in the autumn (November 2010), winter (February 2011) and spring-summer wave (June 2011). The separate SAD variables are here regarded as a characteristic of the individual (autumn type, winter type and spring-summer type).

The control variables can be divided into three groups. First, we have the day-of-the-week dummy variables, to control for any effect occurring across the days of the week. Second, we have the individual control variables, which control for certain characteristics of individuals that may significantly affect their expectations about the stock market. The variables age, nett monthly income, urban character of place of residence, partner and children control for biases related to socioeconomic factors. Here partner and children are dummy variables which are 1 if individuals have a partner or children, respectively. The variable education controls, at least partially, for individual financial expertise. To control for individuals that are always optimistic, as to not get the same problem as in the study by Felton et al. [8] described in the related literature section, the pessimistic-optimistic variable keeps in mind individuals general pessimism-optimism tendencies. Finally, to control for exogenous events bias affecting the expectations of all individuals in one wave, we include a fixed effect variable across time. This is needed because we have panel data, and have three observations for each individual in our data. Here we added two dummy variables for the questionnaire waves, allowing for a different threshold at each wave.

Lastly, we accounted for heteroskedasticity due to the possible difference between the variance of error terms across the cluster of observations from individual subjects. A cluster of observations (we have three waves, and therefore three observations for each individual) can be assumed as independent across each other and homoskedastic within the cluster. Here we used cluster robust standard errors, which relaxes the assumptions that error terms are independent and identically distributed.

When having run the ordered probit regression and having found the sentiment-creating variables that have a significant influence on expected return, we can now use principal component analysis to construct the ISI variables. Principal components analysis is a mathematical procedure that reduces a large set of variables to a small set that still contains most of the information in the large set. The principal component analysis is performed on the correlation matrix of the significant variables. The leading eigenvectors from the eigen decomposition of the correlation matrix describe a series of uncorrelated linear combinations of the variables that contain most of the variance [1]. The ISI variables, for men and women separately, are constructed from the first principal components, which account for as much of the variability in the data as possible.

To examine whether general sentiment influences men and women differently in their return and volatility expectations and trading plans, we again run ordered probit regressions. The three different models tested here can be seen in equation (5.2), (5.3) and (5.4).

$$E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i, \tag{5.2}$$

$$E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i, \tag{5.3}$$

$$E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i, \tag{5.4}$$

Here $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable and $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI and gender. If we find an interaction effect, this means that the ISI has a different influence on the dependent variable, depending on the gender of the individual. Mathematically this can be seen as the partial derivative of the dependent variable to the ISI: $\frac{\partial E(R)}{\partial ISI} = \beta_1 + \beta_3 GENDER$, which is still dependent on gender. In regression 5.4 the coefficients for ISI and gender have a different meaning than in the other two regressions. Here the coefficient for ISI only means something when gender is zero, since gender can be 1 (for males) or 2 (for females) it has no meaning. The coefficient for gender only means something when the ISI is zero, which is not possible since all coefficients in the ISI are positive and the variables in the ISI can only have positive values. Therefore the coefficients for the ISI and gender have no meaning in the third regression. We run all of these regressions with the expected return and volatility on the AEX and S&P500 index in the coming month and year and the past and future trading plans as dependent variables.

Chapter 6

Results and discussion

In this chapter the results of our analyses will be presented. The structure of this chapter will be the same as the hypotheses chapter, so that it is clear for all our hypothesis if they were true or not. Descriptive analysis results will show us the gender differences in the variables (financial and emotional) separately. Econometric analysis will tell us if there are gender differences in sentiment driven investing.

6.1 Descriptive analysis

We employed sixteen variables to study gender differences in risk and return expectations and sentiment-creating variables. Summarized results from all tests done on these sixteen variables can be found in table **??**. The full results for all tests on the data from the questionnaires in November, February, June and on the total dataset can be found in Appendices B, C, D and E, respectively. For all sentiment-creating variables the multiple choice answers were sorted from good mood to bad mood. This means that the lower the assigned score by the individual, the better the mood. The hypotheses regarding these variable groups are reported again below and we will see if our results support these hypotheses.

6.1.1 Return expectation hypothesis

In table 6.1 we find the results of the statistical tests for expected return differences between men and women. We can see that the next month return expectations on the AEX index do not differ between men and women for the questionnaires in November and June. In February however there is a difference in expectations according to the T-test, the Kolmogorov-Smirnov test and the Mann-Whitney U test, which means that the means, the overall distribution and the medians here

differ with gender. From the T-test we can see than the mean return expectation of men is higher than that of women. Looking at the total dataset for next month return expectations on the AEX index we see that the three comparison tests do not give the same results. According to the T-test there is a difference in return expectations, it shows that men have a higher mean return expectation than women. The Mann-Whitney U test finds a different median return expectation for men and women. However, the Kolmogorov-Smirnov test finds no difference in the population distributions of men and women. This could be because this test tests for more deviations from the null hypotheses of equal groups than the T-test and the Mann-Whitney U test, and therefore has less power to detect a shift in the mean or median than the T-test and Mann-Whitney U test, respectively. We conclude that there is a difference in next month return expectations for the AEX index. Men expect higher returns than women.

When analyzing the results for the next year return expectations on the AEX index, we see that almost all results show a difference between men and women. Only, the Kolmogorov-Smirnov test and Mann-Whitney U test for return expectations in June show no difference in gender. Here it could be the case that the T-test result is not correct because we have used two groups with not approximately normally distributed return expectations and we therefore did not fulfill the assumptions of the T-test. For the questionnaires in November and February, and for the total dataset the return expectations were different for men and women according to all tests. The T-test results tell us that the mean return expectations of men where higher than those of women. We therefore conclude that there is a difference in next year return expectations for the AEX index. This difference is more clear than for the next month return expectations, and men expect higher returns than women.

The results for the next month return expectations for the S&P500 index show different results for the different questionnaire months. In November there seems to be no difference in return expectations for men and women. In February the T-test and Mann-Whitney U test, show a difference in the mean and median return expectations, respectively. However, the Kolmogorov-Smirnov test finds no difference. This can again be due to the fact that this test has less power to detect a shift in the mean or median than the other tests. The results from the June questionnaire are normally distributed for men and women so the T-test is very reliable and we do not need the results from the other tests. The T-test shows a difference in return expectations, men have a higher mean return expectation than women. When looking at the total dataset for the next month return expectations on the S&P500 index we find that there is a difference in return expectations. Men expect higher returns than women.

The results for the next year return expectations on the S&P500 index show

a difference in return expectations between men and women in all months, and in the total dataset. Only the Kolmogorov-Smirnov test finds no difference in the dataset in November and June, but this will again be due to the less power in detecting shifts in the mean and median by this test. We conclude that there is a difference in next year return expectations on the S&P500 index between men and women. This difference is more clear than for the next month expectations for this index, and men expect higher returns than women.

Our hypothesis on gender differences in return expectations was as follows: *H1: Men expect higher returns than women, especially for less known indexes and larger time spans.* We have found that men indeed expect higher returns than women, especially for larger time spans. We, however, can not conclude from our tests that the difference in expectations by men and women is even larger for less known indexes.

Variable	Test type	November P-value	November Conclusion	February P-value	February Conclusion	June P-value	June Conclusion	Total P-value	Total Conclusion
	Men/women in the sample	476/262 (65% men)		449/259 (63% men)		399/213 (65% men)		1324/734 (64% men)	
Next month return expectations AEX	Shapiro-Wilk Test on men	0,00011	not normal	0,00000	not normal	0,00037	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,00071	not normal	0,00008	not normal	0,14870	normal	0,00000	not normal
	Levene's test	0,82960771	homoscedasticity	0,18539299	homoscedasticity	0,34764279	homoscedasticity	0,97970061	homoscedasticity
	T-test	0,1702 (T>t)	no difference	0,0003 (T>t)	difference	0,2376 (T<t)	no difference	0,0316 (T>t)	difference
	Kolmogorov-Smirnov test	1	no difference	0,026	difference	0,994	no difference	0,171	no difference
	Mann-Whitney U Test	0,3854	no difference	0,0008	difference	0,5660	no difference	0,0418	difference
	Men/women in the test	410/168 (71% men)		372/157 (70% men)		323/128 (72% men)		1105/453 (71% men)	
Next year return expectations AEX	Shapiro-Wilk Test on men	0,00000	not normal	0,00067	not normal	0,00003	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,00173	not normal	0,00003	not normal	0,00001	not normal	0,00000	not normal
	Levene's test	0,00000054	heteroscedasticity	0,0030662	heteroscedasticity	0,84481569	homoscedasticity	0,00000000	heteroscedasticity
	T-test	0,0022 (T>t)	difference	0,0000 (T>t)	difference	0,0427 (T>t)	difference	0,0000 (T>t)	difference
	Kolmogorov-Smirnov test	0,007	difference	0,000	difference	0,406	no difference	0,000	difference
	Mann-Whitney U Test	0,0021	difference	0,0000	difference	0,0613	no difference	0,0000	difference
	Men/women in the test	424/174 (71% men)		377/158 (70% men)		327/129 (72% men)		1128/461 (71% men)	
Next month return expectations S&P 500	Shapiro-Wilk Test on men	0,00127	not normal	0,0007	not normal	0,17921	normal	0,00008	not normal
	Shapiro-Wilk Test on women	0,20017	normal	0,06854	normal	0,99171	normal	0,13241	normal
	Levene's test	0,39433140	homoscedasticity	0,20581712	homoscedasticity	0,07805149	homoscedasticity*	0,0165738	heteroscedasticity*
	T-test	0,0802 (T>t)	no difference	0,0005 (T>t)	difference	0,0198 (T>t)	difference	0,0001 (T>t)	difference
	Kolmogorov-Smirnov test	0,0717	no difference	0,086	no difference	x	x	0,012	difference
	Mann-Whitney U Test	0,1078	no difference	0,0026	difference	x	x	0,0002	difference
	Men/women in the test	350/136 (72% men)		302/121 (71%)		273/105 (72% men)		925/362 (72% men)	
Next year return expectations S&P 500	Shapiro-Wilk Test on men	0,00002	not normal	0,10282	normal	0,00579	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,01136	not normal	0,00002	not normal	0,06772	normal	0,00000	not normal
	Levene's test	0,00018790	homoscedasticity	0,00012938	heteroscedasticity	0,51754901	homoscedasticity	0,00068989	heteroscedasticity
	T-test	0,0154 (T>t)	difference	0,0000 (T>t)	difference	0,0068 (T>t)	difference	0,0000 (T>t)	difference
	Kolmogorov-Smirnov test	0,134	no difference	0,001	difference	0,273	no difference	0,000	difference
	Mann-Whitney U Test	0,0311	difference	0,0000	difference	0,0085	difference	0,0000	difference
	Men/women in the test	351/136 (72% men)		300/119 (72% men)			269/101 (73% men)	920/356 (72% men)	

Figure 6.1: Representation of the output of the statistical tests done on the expected return on the AEX and S&P500 index for next month and next year. In this table the P-value and conclusion for each test in each month and for the total dataset is given. If the data was normally distributed for men and women, only the t-test was performed and 'x' is filled in for the other tests. *Here we found homoscedasticity (heteroscedasticity) in the mean, but there is heteroscedasticity (homoscedasticity) in the median.

6.1.2 Risk expectation hypothesis

In tabel 6.2 the summarized results on the risk expectations can be found. For the next month risk expectations on the AEX index, we find that in November there is a difference: men expect a lower risk then women. In February we find no difference between the risk expectations of men and women. In June we again find a difference, but here we find that women expect a lower mean risk than men. The results on the total dataset show no difference in risk expectations between men and women. This is probably due to the fact that the differences in risk expectations in November and June compensate each other. We conclude that whether there is a difference in next month risk expectations on the AEX index is dependent on the month of the year.

The results for the next year risk expectations on the AEX index show a difference between men and women in every month of the questionnaire and in the total dataset. Only the Mann-Whitney U test shows no difference between the risk expectations of men and women in the total dataset. This can be due to the fact that the medians are the same, whilst the means and the distribution differ for men and women. A strange finding is that in November, February and in the total dataset men expect a lower risk then women, but in June women expect a lower risk than men. This could be due to the influence of SAD, which we hypothesized to have a stronger influence on women. Here we can not draw a conclusion because we do find a significant difference in the risk expectations of men and women in each month, but it is unclear whether men or women predict a higher risk.

When analyzing the results for the next month risk expectations on the S&P500 index, we find no difference between men and women for November, February and the total dataset. We do find a difference in June, here women expect a lower risk than men, but this difference is so small that it was not detected by the Kolmogorov-Smirnov test. We conclude that there is no gender difference in next month risk expectations on the S&P500 index.

The results for the next year risk expectations on the S&P500 index show no difference between men and women in November. The results from the February questionnaire differ between the tests. The T-test shows a difference but the Kolmogorov-Smirnov test and the Mann-Whitney U test do not. Here it could again be the case that the T-test result is not correct because we have used two groups with not approximately normally distributed risk expectations and we therefore did not fulfill the assumptions of the T-test. In June we find a difference in risk expectations, women expect a lower risk than men. The results from the total dataset show no difference between men and women in risk expectations on the S&P500 index.

When comparing the risk expectation results for different forecast periods and different indexes, we find that in June there is always a difference in risk expec-

tations between men and women. In this month women expect a lower risk than men on both indexes and for next month and next year predictions. In the other months there is no difference, or men expect lower risks.

Our hypothesis on gender differences in risk expectations was as follows: *H2: Men expect a lower volatility than women, especially for less known indexes and larger time spans.* We have not found that men expect a lower volatility than women. For the AEX index our results are unclear, but for the S&P500 index we have found that there is no difference in the risk expectations of men and women.

Variable	Test type	November P-value	November Conclusion	February P-value	February Conclusion	June P-value	June Conclusion	Total P-value	Total Conclusion
	Men/women in the sample	476/262 (65% men)		449/259 (63% men)		399/213 (65% men)		1324/734 (64% men)	
Next month risk expectations AEX	Shapiro-Wilk Test on men	1,00000	normal	0,80771	normal	0,47622	normal	0,32084	normal
	Shapiro-Wilk Test on women	0,04292	not normal	0,68396	normal	0,82014	normal	0,18113	normal
	Levene's test	0,94555602	homoscedasticity	0,48197008	homoscedasticity	0,00165396	heteroscedasticity	0,05569931	homoscedasticity
	T-test	0,0075 (T>t)	difference	0,0812 (T>t)	no difference	0,0027 (T<t)	difference	0,2450 (T>t)	no difference
	Kolmogorov-Smirnov test	0,413	no difference	x	x	x	x	x	x
	Mann-Whitney U Test	0,0323	difference	x	x	x	x	x	x
	Men/ women in the test	402/182 (69% men)		370/159 (70% men)		322/127 (72% men)		1094/468 (70% men)	
Next year risk expectations AEX	Shapiro-Wilk Test on men	0,16887	normal	0,00513	not normal	0,99998	normal	0,00035	not normal
	Shapiro-Wilk Test on women	0,08762	normal	0,79878	normal	0,49057	normal	0,20135	normal
	Levene's test	0,18686630	homoscedasticity	0,02207726	heteroscedasticity	0,07557156	homoscedasticity*	0,01186281	heteroscedasticity
	T-test	0,0179 (T>t)	difference	0,0041 (T>t)	difference	0,0398 (T<t)	difference	0,0471 (T>t)	difference
	Kolmogorov-Smirnov test	x	x	0,017	difference	x	x	0,015	difference
	Mann-Whitney U Test	x	x	0,0039	difference	x	x	0,0554	no difference
	Men/women in the test	409/180 (69% men)		372/164 (69% men)		327/130 (72% men)		1108/474 (70% men)	
Next month risk expectations S&P 500	Shapiro-Wilk Test on men	0,13636	normal	0,78603	normal	0,04489	not normal	0,09254	normal
	Shapiro-Wilk Test on women	0,60283	normal	0,55000	normal	0,76128	normal	0,63986	normal
	Levene's test	0,55556875	homoscedasticity	0,05897184	homoscedasticity	0,09648992	homoscedasticity	0,44384527	homoscedasticity
	T-test	0,4439 (T<t)	no difference	0,2514 (T>t)	no difference	0,0197 (T<t)	difference	0,2170 (T<t)	no difference
	Kolmogorov-Smirnov test	x	x	x	x	0,345	no difference	x	x
	Mann-Whitney U Test	x	x	x	x	0,0453	difference	x	x
	Men/women in the test	350/141 (71% men)		313/129 (71% men)		275/107 (72% men)		938/377 (71% men)	
Next year risk expectations S&P 500	Shapiro-Wilk Test on men	0,02432	not normal	0,66761	normal	0,08355	normal	0,04525	not normal
	Shapiro-Wilk Test on women	0,99791	normal	0,04812	not normal	0,9970	normal	0,01004	not normal
	Levene's test	0,36179654	homoscedasticity	0,50931098	homoscedasticity	0,53361673	homoscedasticity	0,46816899	homoscedasticity
	T-test	0,1396 (T>t)	no difference	0,0369 (T>t)	difference	0,0919 (T<t)	difference	0,1813 (T>t)	no difference
	Kolmogorov-Smirnov test	0,718	no difference	0,413	no difference	x	x	0,990	no difference
	Mann-Whitney U Test	0,3481	no difference	0,0796	no difference	x	x	0,4261	no difference
	Men/women in the test	352/136 (72% men)		309/129 (71% men)		267/102 (72% men)		928/367 (72% men)	

Figure 6.2: Representation of the output of the statistical tests done on the expected volatility on the AEX and S&P500 index for next month and next year. In this table the P-value and conclusion for each test in each month and for the total dataset is given. If the data was normally distributed for men and women, only the t-test was performed and 'x' is filled in for the other tests. *Here we found homoscedasticity (heteroscedasticity) in the mean, but there is heteroscedasticity (homoscedasticity) in the median.

6.1.3 Trading activity hypothesis

In tabel 6.3 the statistical test results for gender differences in trading activity are shown. What stands out in the results on trading activity is that only few individuals have traded in the past and are planning to trade in the future. About a quarter of the people in our study are actively trading. We can also see that men trade more than women because in the total dataset 64% of the individuals are male, but the of the individuals that traded in the past 76% is male and of the individuals that plan to trade in the future 80% is male.

The results for trading in the past show that there is no difference in the buying-selling behavior of men and women. This means that men and women are not differently directed to buying more or selling more stock. We have found this result for each month and for the total dataset. The results for trading plans in the future show similar results. There is no difference in the intended buying-selling behavior of men and women.

Our hypothesis on gender differences in trading activity was as follows: *H3: Men trade more, and are more directed towards buying new stock instead of selling stock they own.* We have found that men trade more than women, but men are not more directed towards buying new stock instead of selling stock than women. Men and women are not differently directed toward buying more or selling more stock.

		November		February		June		Total	
	Men/women in the sample	476/262 (65% men)		449/259 (63% men)		399/213 (65% men)		1324/734 (64% men)	
Variable	Test type	P-value	Conclusion	P-value	Conclusion	P-value	Conclusion	P-value	Conclusion
Past trading	Shapiro-Wilk Test on men	0,00879	not normal	0,0154	not normal	0,00631	not normal	0,00002	not normal
	Shapiro-Wilk Test on women	0,01027	not normal	0,36615	normal	0,14115	normal	0,01744	not normal
	Levene's test	0,96848752	homoscedasticity	0,19354453	homoscedasticity	0,26746488	homoscedasticity	0,28258284	homoscedasticity
	T-test	0,1136 (T>t)	no difference	0,3268 (T<t)	no difference	0,4291 (T<t)	no difference	0,3750 (T>t)	no difference
	Kolmogorov-Smirnov test	0,578	no difference	0,949	no difference	0,991	no difference	0,751	no difference
	Mann-Whitney U Test	0,1899	no difference	0,7683	no difference	0,9672	no difference	0,5260	no difference
	Men/women in the test	106/41 (72% men)		120/38 (76% men)		92/19 (83% men)		318/98 (76% men)	
Future trading	Shapiro-Wilk Test on men	0,18287	normal	0,00107	not normal	0,05686	normal	0,00067	not normal
	Shapiro-Wilk Test on women	0,54365	normal	0,60729	normal	0,99924	normal	0,38672	normal
	Levene's test	0,22371084	homoscedasticity	0,00848455	heteroscedasticity	0,50498185	homoscedasticity	0,00579231	heteroscedasticity
	T-test	0,3694 (T<t)	no difference	0,1160 (T<t)	no difference	0,1809 (T<t)	no difference	0,0729 (T<t)	no difference
	Kolmogorov-Smirnov test	x	x	0,413	no difference	x	x	0,352	no difference
	Mann-Whitney U Test	x	x	0,3168	no difference	x	x	0,2155	no difference
	Men/women in the test	78/28 (74% men)		90/18 (83% men)		67/14 (83% men)		235/60 (80% men)	
Spring-autumn preference	Shapiro-Wilk Test on men	0,00000	not normal	0,00018	not normal	0,00001	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,00002	not normal	0,00000	not normal	0,00009	not normal	0,00000	not normal
	Levene's test	0,00455295	heteroscedasticity	0,01518094	heteroscedasticity*	0,0039906	heteroscedasticity	0,00001254	heteroscedasticity
	T-test	0,1376 (T<t)	no difference	0,2355 (T>t)	no difference	0,1728 (T<t)	no difference	0,2065 (T<t)	no difference
	Kolmogorov-Smirnov test	0,202	no difference	0,746	no difference	0,232	no difference	0,027	difference
	Mann-Whitney U Test	0,1564	no difference	0,6001	no difference	0,2524	no difference	0,2219	no difference
	Men/women in the test	everyone (65% men)		everyone (63% men)		everyone (65% men)		everyone (64% men)	
Optimistic-pessimistic	Shapiro-Wilk Test on men	0,04126	not normal	0,09822	normal	0,18971	normal	0,00938	not normal
	Shapiro-Wilk Test on women	0,94464	normal	0,24505	normal	0,42944	normal	0,01490	not normal
	Levene's test	0,67278206	homoscedasticity	0,9431146	homoscedasticity	0,27108418	homoscedasticity	0,38491962	homoscedasticity
	T-test	0,0493 (T>t)	difference	0,1304 (T>t)	no difference	0,2381 (T>t)	no difference	0,0207 (T>t)	difference
	Kolmogorov-Smirnov test	0,884	no difference	x	x	x	x	0,709	no difference
	Mann-Whitney U Test	0,1371	no difference	x	x	x	x	0,0726	no difference
	Men/women in the test	everyone (65% men)		everyone (63% men)		everyone (65% men)		everyone (64% men)	

Figure 6.3: Representation of the output of the statistical tests done past an future trading on the AEX and S&P500 index and on spring-autumn preference and optimism. In this table the P-value and conclusion for each test in each month and for the total dataset is given. If the data was normally distributed for men and women, only the t-test was performed and 'x' is filled in for the other tests. *Here we found homoscedasticity (heteroscedasticity) in the mean, but there is heteroscedasticity (homoscedasticity) in the median.

6.1.4 General sentiment effect hypothesis

The results for the 'currently feeling' variable in table 6.1 show no difference in the mood of men and women, for all months and for the total dataset.

Our hypothesis on gender differences in general sentiment was as follows: *H4: The average man will report a better general feeling than the average woman.* We have found that this is not true. Our results show no difference in the reported current feeling of men and women.

6.1.5 Sports sentiment effect hypothesis

Not many individuals have a favorite sports team, as can be seen in table 6.1. Only 509 men and 127 women reported to have a favorite sports team (or person), which means that 80% of individuals with a favorite sports team are male. Since in the total sample 64% of the individuals was male, we find that males more often have a favorite sports team than women. The tests where done with even less men and women because not all sports teams (persons) had to play a match in the three days before filling in the questionnaire.

In November men reported a significantly worse performance of there favorite sports teams than women and in February and June there was no difference in the judgment between men's and women's favorite sports teams. The results on the total dataset show different results for the different tests. The T-test shows a difference but the Kolmogorov-Smirnov test and the Mann-Whitney U test do not. Here it could again be the case that the T-test result is not correct because we have used two groups with not approximately normally distributed data and we therefore did not fulfill the assumptions of the T-test. We conclude that there is no significant difference in the individual judgment of the performance of men and women's favorite sports teams.

Our hypothesis on gender differences in sports sentiment was as follows: *H5: Men have a favorite sports team (person) more often than women. The distribution between good and bad performances (as judged by the individuals) will be equal for men and women.* This is hypothesis is consistent with our results.

6.1.6 Weather sentiment effect hypothesis

The results for the current weather perception of men and women only show a gender difference in June. In June the T-test and the Mann-Whitney U test find a difference in mean and median. However this difference is so small that it is not detected by the Kolmogorov-Smirnov test. In the other months and in the total dataset we find no difference in the weather perception between men and

women. We conclude that there is no difference in the weather perception of men and women.

Our hypothesis on gender differences in weather sentiment was as follows: *H6: Men have a more positive weather perception than women.* We have found that this is not true. Our results show no difference in the weather perception of men and women.

6.1.7 SAD sentiment effect hypothesis

When asking individuals in November whether they suffer from winter blues, we find that women report to suffer significantly more than men. In February there is no difference between men and women, but in June women again report to suffer more from SAD. In the total dataset we find that women suffer more from winter blues than men

Our hypothesis on gender differences in SAD sentiment was as follows: *H7: Men suffer less from SAD than women.* We have found that our results are consistent with this hypothesis.

		November		February		June		Total	
	Men/women in the sample	476/262 (65% men)		449/259 (63% men)		399/213 (65% men)		1324/734 (64% men)	
Variable	Test type	P-value	Conclusion	P-value	Conclusion	P-value	Conclusion	P-value	Conclusion
Favorite sports team's performance	Shapiro-Wilk Test on men	0,81171	normal	0,02328	not normal	0,04430	not normal	0,04010	not normal
	Shapiro-Wilk Test on women	0,23486	normal	0,06484	normal	0,32396	normal	0,04731	not normal
	Levene's test	0,55686268	homoscedasticity	0,90509389	homoscedasticity	0,14792713	homoscedasticity	0,19987353	homoscedasticity
	T-test	0,0415 (T>t)	difference	0,2880 (T>t)	no difference	0,4214 (T>t)	no difference	0,0417 (T>t)	difference
	Kolmogorov-Smirnov test	x	x	0,953	no difference	0,991	no difference	0,439	no difference
	Mann-Whitney U Test	x	x	0,4895	no difference	0,8945	no difference	0,0904	no difference
	Men/women in the test	144/31 (82% men)		132/27 (83% men)		23/9 (72% men)		299/67 (82% men)	
Current weather perception	Shapiro-Wilk Test on men	1,00000	normal	0,45457	normal	0,03567	not normal	0,49967	normal
	Shapiro-Wilk Test on women	0,99998	normal	0,71028	normal	0,76309	normal	0,99948	normal
	Levene's test	0,01185801	heteroscedasticity	0,04248104	heteroscedasticity*	0,2418155	homoscedasticity	0,20044825	homoscedasticity
	T-test	0,3595 (T<t)	no difference	0,2114 (T>t)	no difference	0,0087 (T<t)	difference	0,1469 (T<t)	no difference
	Kolmogorov-Smirnov test	x	x	x	x	0,132	no difference	x	x
	Mann-Whitney U Test	x	x	x	x	0,0169	difference	x	x
	Men/women in the test	everyone (65% men)		everyone (63% men)		everyone (65% men)		everyone (64% men)	
Suffering from SAD	Shapiro-Wilk Test on men	0,00000	not normal	0,00000	not normal	0,00000	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,00000	not normal	0,00000	not normal	0,00000	not normal	0,00000	not normal
	Levene's test	0,09989044	heteroscedasticity	0,5075486	homoscedasticity	0,25102369	homoscedasticity*	0,02474815	heteroscedasticity
	T-test	0,0034 (T<t)	difference	0,0695 (T<t)	no difference	0,0201 (T<t)	difference	0,0001 (T<t)	difference
	Kolmogorov-Smirnov test	0,025	difference	0,401	no difference	0,077	no difference	0,000	difference
	Mann-Whitney U Test	0,0023	difference	0,0842	no difference	0,0152	difference	0,0000	difference
	Men/women in the test	everyone (65% men)		everyone (63% men)		everyone (65% men)		everyone (64% men)	
Currently feeling general feeling	Shapiro-Wilk Test on men	0,12032	normal	0,56619	normal	0,00128	not normal	0,00000	not normal
	Shapiro-Wilk Test on women	0,03055	not normal	0,04399	not normal	0,14480	normal	0,00030	not normal
	Levene's test	0,09181225	homoscedasticity	0,63324476	homoscedasticity	0,55209563	homoscedasticity	0,1050292	homoscedasticity
	T-test	0,0979 (T<t)	no difference	0,2482 (T>t)	no difference	0,1532 (T<t)	no difference	0,1775 (T<t)	no difference
	Kolmogorov-Smirnov test	0,995	no difference	0,909	no difference	0,851	no difference	1,000	no difference
	Mann-Whitney U Test	0,3183	no difference	0,3618	no difference	0,2599	no difference	0,5069	no difference
	Men/women in the test	everyone (65% men)		everyone (63% men)		everyone (65% men)		everyone (64% men)	

Table 6.1: Representation of the output of the statistical tests done on the sentiment-creating variables sports teams performance, weather perception, SAD and general feeling. In this table the P-value and conclusion for each test in each month and for the total dataset is given. If the data was normally distributed for men and women, only the t-test was performed and 'x' is filled in for the other tests. *Here we found homoscedasticity (heteroscedasticity) in the mean, but there is heteroscedasticity (homoscedasticity) in the median.

6.2 Econometric analysis

6.2.1 Creating the ISI

To create the Investor Sentiment Index, we first ran ordered probit regressions to see which sentiment-creating variables have a significant influence on expected return. The results of these regressions can be found in table 6.2. When using a significance level of 10%, the sentiment-creating variables that have an impact on the expected return of men are general feeling and SAD in the spring-summer. For women the significant variables are also general feeling and SAD in the spring-summer. We will now use general feeling and all SAD variables in creating the ISI. By using principal component analysis on the correlation matrix of the significant variables for men, we find the following ISI:

$$\begin{aligned} ISI_{men} = {} & 0.2928 \cdot \text{general feeling} + 0.5519 \cdot \text{SAD in the autumn} \\ & + 0.5552 \cdot \text{SAD in the winter} + 0.5490 \cdot \text{SAD in the spring-summer.} \end{aligned} \tag{6.1}$$

Doing the same for women we find:

$$\begin{aligned} ISI_{women} = {} & 0.1792 \cdot \text{general feeling} + 0.5674 \cdot \text{SAD in the autumn} \\ & + 0.5984 \cdot \text{SAD in the winter} + 0.5366 \cdot \text{SAD in the spring-summer.} \end{aligned} \tag{6.2}$$

For creating the ISI_{men} (ISI_{women}) only the observations of the sentiment-creating variables for men (women) are used.

6.2.2 Overall sentiment effect hypothesis

The results of the regression from equation (5.2) with as dependent variables expected AEX return, expected S&P500 return, expected AEX volatility and expected S&P500 volatility can be found in table 6.3, 6.4, 6.5 and 6.6, respectively. As we can see from table 6.3 the ISI for men does not have a significant influence on the AEX return expectations for the next month and year. We can also see that the ISI for women has no significant influence on the AEX return expectations of women for next month and next year. In table 6.4 the results from the regression with the expected return on the S&P500 index are portrayed. We find no significant influence from the ISI for men on the return expectations, next month and next year. For women we find that the ISI has a significant influence (when using a 10% significance level) on the return expectations in the next month. The coefficient here is -0,11, which means that when the score for sentiment is higher (and therefore the sentiment is more negative, worse mood) the expected return is lower, as we would expect. The ISI for women does not have a significant influence

	Men		Women	
Sentiment-creating variables	Coeff.	Sign.	Coeff.	Sign.
General feeling	-0,11	0,10	-0,16	0,08
Perceived weather	-0,03	0,50	0,02	0,74
Sport results	-0,04	0,42	0,05	0,62
SAD in the autumn	-0,08	0,24	-0,13	0,25
SAD in the winter	-0,03	0,70	-0,09	0,55
SAD in the spring-summer	0,17	0,08	0,30	0,03
Day-of-the-week control variables				
Sunday dummy	-0,01	0,94	-0,43	0,17
Monday dummy	0,21	0,15	0,17	0,55
Tuesday dummy	0,16	0,34	-0,20	0,53
Wednesday dummy	-0,07	0,68	-0,21	0,57
Thursday dummy	-0,05	0,77	-0,27	0,41
Friday dummy	-0,09	0,58	-0,16	0,60
Individual control variables				
Age	0,10	0,01	-0,07	0,32
Nett income	0,01	0,67	0,02	0,51
Urban character of place of residence	0,00	0,89	-0,05	0,46
Partner dummy	0,01	0,91	0,44	0,01
Children dummy	0,07	0,48	-0,33	0,07
Education level	-0,08	0,01	-0,07	0,17
Pessimistic-optimistic	0,04	0,50	0,00	0,99
Fixed effect control variables				
Winter dummy	0,24	0,00	0,04	0,79
Spring-summer dummy	0,17	0,00	-0,73	0,00
Valid observations (3 waves)	870		343	

Table 6.2: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \sum_j \beta_j SENT_{j,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the AEX index in the next month, $SENT_{j,i}$ are the sentiment-creating variables and $CONTROLS_{k,i}$ are the control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

on the next year return expectations on the S&P500 index. From table 6.5 we can see that the ISI for men and women both do not have a significant influence on the next month and next year risk expectations on the AEX index. From table 6.6 we can also see that the ISI for men and women does not have a significant influence on the next month and next year risk expectations on the S&P500 index.

The results of the regression from equation (5.3) with as dependent variables expected AEX return, expected S&P500 return, expected AEX volatility and expected S&P500 volatility can be found in table 6.7, 6.8, 6.9 and 6.10, respectively. As we can see from table 6.7 the ISI for men does not have a significant influence on the AEX return expectations for the next month and year. We can also see that the ISI for women has no significant influence on the AEX return expectations of women for next month and next year. In all cases gender does have a significant influence on the AEX return expectations. The coefficient for gender is negative, meaning that females expect a lower return then males, as we also found in section 6.1.1. In table 6.8 the results from the regression with the expected return on the S&P500 index are portrayed. We find no significant influence from the ISI for men or women on the return expectations, next month and next year. Again we find that gender does have a significant influence on the expected return and that females expect lower returns than males. From table 6.9 we can see that the ISI for men and women both do not have a significant influence on the next month and next year risk expectations on the AEX index. However, the risk expectations for the next year are quite close to our significance level of 10%. In this model the gender dummy variable does not have a significant influence on the risk expectations on the AEX index. From table 6.10 we can also see that the ISI for men and women does not have a significant influence on the next month and next year risk expectations on the S&P500 index. Here the gender variable does not have a significant influence on the risk expectations either.

The results of the regression from equation (5.4) with as dependent variables expected AEX return, expected S&P500 return, expected AEX volatility and expected S&P500 volatility can be found in table 6.11, 6.12, 6.13 and 6.14, respectively. Here we only look at the significance and coefficient for the interaction effect, because as discussed in the methods chapter, the coefficients for the ISI and gender have no clear meaning here. As we can see from table 6.11 we can in no case speak of an interaction effect between ISI and gender for the expected return on the AEX index. In table 6.12 we see the regression results for the expected return on the S&P500 index. For the next month return expectations we can speak of an interaction effect. This interaction effect is in both cases negative, meaning that the ISI has a more positive (or less negative) influence on the return expectations for females than for males. For the next year return expectations we have not found an interaction effect. From table 6.13 we do not see a significant interaction

effect for men or women for the expected volatility on the AEX index. From table 6.14 we see no influence from an interaction between the ISI and gender on the risk expectations for the S&P500 index.

The hypothesis on overall sentiment effects on risk and return was as follows: *H8: The ISI of men has a smaller influence on their expected return and volatility than that of women.* We have found that this is not true because the ISI has, in almost all cases, no influence on the expected risk and return of men and women. Only in the case of next month return expectations on the S&P500 index for women we find that the ISI for women has a significant influence. We found that the interaction effect between gender and the ISI was only significant for the next month return expectations on the S&P500 index. Here the ISI has a more positive (or less negative) influence on the return expectations for females than for males.

	Dutch AEX return expectations							
	Men				Women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,00	0,97	0,03	0,59	0,01	0,91	0,00	0,98
Day-of-the-week control variables								
Sunday dummy	-0,03	0,89	0,01	0,98	-0,29	0,33	-0,07	0,82
Monday dummy	0,17	0,20	0,04	0,81	0,26	0,32	0,25	0,31
Tuesday dummy	0,13	0,41	-0,04	0,79	-0,10	0,74	-0,05	0,84
Wednesday dummy	-0,10	0,53	-0,05	0,74	-0,05	0,89	0,32	0,24
Thursday dummy	-0,08	0,61	-0,09	0,60	-0,15	0,62	0,24	0,39
Friday dummy	-0,13	0,43	-0,10	0,57	-0,03	0,92	0,03	0,92
Individual control variables								
Age	0,10	0,01	-0,08	0,05	-0,07	0,30	-0,09	0,22
Nett income	0,01	0,60	0,04	0,07	0,03	0,49	0,03	0,46
Urban character of place of residence	0,02	0,62	-0,02	0,50	-0,05	0,44	-0,12	0,05
Partner dummy	0,01	0,89	0,03	0,82	0,42	0,02	0,25	0,21
Children dummy	0,07	0,46	0,10	0,40	-0,29	0,13	-0,19	0,37
Education level	-0,07	0,01	-0,01	0,85	-0,06	0,22	-0,02	0,77
Pessimistic-optimistic	0,01	0,90	-0,02	0,81	-0,04	0,72	-0,07	0,53
Fixed effect control variables								
Winter dummy	0,25	0,00	0,32	0,00	0,06	0,67	0,04	0,75
Spring-summer dummy	-0,89	0,00	-0,68	0,00	-0,72	0,00	-0,67	0,00
Valid observations (3 waves)	870		886		343		349	

Table 6.3: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index and $CONTROLS_{k,i}$ are the control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

U.S. S&P500 return expectations

	Men				Women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,03	0,56	-0,02	0,61	-0,11	0,10	0,06	0,42
Day-of-the-week control variables								
Sunday dummy	0,02	0,90	-0,10	0,58	0,20	0,54	-0,01	0,97
Monday dummy	0,17	0,23	0,05	0,73	0,58	0,04	0,29	0,27
Tuesday dummy	0,06	0,70	-0,08	0,61	0,36	0,20	0,05	0,87
Wednesday dummy	0,02	0,92	0,00	0,98	0,86	0,01	0,56	0,06
Thursday dummy	0,01	0,96	-0,18	0,32	0,42	0,17	0,54	0,09
Friday dummy	0,10	0,55	0,04	0,84	0,27	0,41	0,03	0,92
Individual control variables								
Age	0,08	0,04	-0,04	0,39	-0,07	0,31	-0,05	0,54
Nett income	0,04	0,07	0,05	0,08	0,06	0,13	0,06	0,31
Urban character of place of residence	0,04	0,23	0,01	0,84	-0,13	0,10	-0,17	0,05
Partner dummy	-0,01	0,95	-0,02	0,87	0,51	0,03	0,42	0,15
Children dummy	0,00	0,98	0,07	0,55	-0,13	0,52	-0,13	0,55
Education level	-0,05	0,12	0,04	0,23	-0,07	0,25	-0,05	0,45
Pessimistic-optimistic	0,08	0,24	0,06	0,47	0,10	0,36	-0,05	0,65
Fixed effect control variables								
Winter dummy	0,32	0,00	0,34	0,00	0,26	0,06	0,11	0,42
Spring-summer dummy	-0,32	0,00	-0,37	0,00	-0,46	0,00	-0,59	0,00
Valid observations (3 waves)	729		726		269		268	

Table 6.4: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the S&P500 index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index and $CONTROLS_{k,i}$ are the control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

Dutch AEX risk expectations	Men				Women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,03	0,51	0,04	0,39	-0,01	0,87	0,04	0,59
Day-of-the-week control variables								
Sunday dummy	-0,09	0,63	-0,06	0,75	-0,26	0,30	0,09	0,74
Monday dummy	0,04	0,78	0,07	0,63	-0,04	0,85	0,57	0,01
Tuesday dummy	0,06	0,72	0,06	0,67	0,01	0,98	0,40	0,11
Wednesday dummy	-0,01	0,95	-0,01	0,97	0,10	0,68	0,48	0,05
Thursday dummy	-0,10	0,55	0,07	0,68	-0,24	0,36	-0,04	0,88
Friday dummy	-0,04	0,83	0,00	0,99	-0,36	0,15	-0,01	0,96
Individual control variables								
Age	0,14	0,00	0,17	0,00	-0,03	0,69	-0,03	0,62
Nett income	-0,02	0,35	-0,01	0,70	-0,03	0,38	-0,05	0,21
Urban character of place of residence	0,00	0,93	-0,03	0,44	-0,02	0,81	-0,07	0,24
Partner dummy	-0,02	0,84	0,19	0,05	-0,11	0,54	-0,20	0,28
Children dummy	0,08	0,47	0,01	0,91	-0,13	0,49	-0,16	0,40
Education level	-0,04	0,14	-0,01	0,77	-0,04	0,49	-0,01	0,81
Pessimistic-optimistic	-0,04	0,46	-0,01	0,92	-0,07	0,47	-0,04	0,69
Fixed effect control variables								
Winter dummy	0,15	0,08	0,35	0,00	0,07	0,63	0,28	0,02
Spring-summer dummy	-0,89	0,00	-0,66	0,00	-0,57	0,00	-0,32	0,01
Valid observations (3 waves)	863		873		354		363	

Table 6.5: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index and $CONTROLS_{k,i}$ are the control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	U.S. S&P500 risk expectations							
	Men				Women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,00	0,96	-0,02	0,68	-0,04	0,51	0,02	0,81
Day-of-the-week control variables								
Sunday dummy	-0,25	0,21	-0,27	0,14	-0,01	0,99	-0,32	0,33
Monday dummy	0,07	0,70	0,02	0,90	0,10	0,74	0,08	0,79
Tuesday dummy	-0,10	0,58	-0,13	0,41	-0,13	0,68	-0,17	0,60
Wednesday dummy	-0,13	0,51	-0,20	0,28	0,36	0,20	0,14	0,66
Thursday dummy	-0,02	0,90	-0,06	0,73	-0,01	0,96	-0,35	0,25
Friday dummy	-0,24	0,24	-0,07	0,72	-0,17	0,60	-0,45	0,15
Individual control variables								
Age	0,08	0,03	0,07	0,17	-0,04	0,57	0,00	0,96
Nett income	-0,02	0,38	0,02	0,28	0,03	0,49	-0,05	0,35
Urban character of place of residence	-0,01	0,73	0,02	0,50	-0,09	0,14	-0,11	0,15
Partner dummy	0,15	0,18	0,26	0,03	0,11	0,60	0,04	0,89
Children dummy	0,10	0,28	0,13	0,26	0,06	0,76	-0,01	0,98
Education level	-0,04	0,18	-0,03	0,48	-0,06	0,24	-0,04	0,54
Pessimistic-optimistic	0,08	0,22	0,05	0,46	-0,01	0,90	-0,03	0,78
Fixed effect control variables								
Winter dummy	0,28	0,00	0,37	0,00	0,16	0,31	0,32	0,02
Spring-summer dummy	-0,43	0,00	-0,25	0,00	-0,27	0,07	0,01	0,95
Valid observations (3 waves)	737		730		283		273	

Table 6.6: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the $S\&P500$ index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index and $CONTROLS_{k,i}$ are the control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	Dutch AEX return expectations							
	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,01	0,79	0,02	0,60	0,01	0,69	0,02	0,60
Gender dummy	-0,15	0,06	-0,34	0,00	-0,16	0,06	-0,34	0,00
Day-of-the-week control variables								
Sunday dummy	-0,10	0,50	0,01	0,97	-0,10	0,49	0,01	0,97
Monday dummy	0,20	0,10	0,10	0,43	0,20	0,10	0,10	0,42
Tuesday dummy	0,06	0,63	-0,03	0,81	0,06	0,63	-0,03	0,81
Wednesday dummy	-0,05	0,71	0,07	0,63	-0,05	0,72	0,07	0,63
Thursday dummy	-0,09	0,50	0,01	0,94	-0,09	0,50	0,01	0,94
Friday dummy	-0,11	0,43	-0,05	0,73	-0,11	0,43	-0,05	0,73
Individual control variables								
Age	0,06	0,07	-0,08	0,03	0,06	0,07	-0,08	0,03
Nett income	0,01	0,49	0,04	0,06	0,01	0,49	0,03	0,06
Urban character of place of residence	0,00	0,89	-0,04	0,15	0,00	0,90	-0,04	0,15
Partner dummy	0,11	0,19	0,07	0,50	0,11	0,19	0,07	0,50
Children dummy	-0,01	0,93	0,04	0,68	-0,01	0,94	0,04	0,68
Education level	-0,06	0,02	-0,01	0,81	-0,06	0,01	-0,01	0,81
Pessimistic-optimistic	-0,01	0,87	-0,03	0,60	-0,01	0,84	-0,03	0,60
Fixed effect control variables								
Winter dummy	0,20	0,00	0,25	0,00	0,20	0,00	0,25	0,00
Spring-summer dummy	-0,84	0,00	-0,67	0,00	-0,84	0,00	-0,67	0,00
Valid observations (3 waves)	1213		1235		1213		1235	

Table 6.7: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	U.S. S&P500 return expectations							
	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	-0,01	0,84	-0,01	0,87	0,00	0,93	-0,01	0,89
Gender dummy	-0,21	0,02	-0,24	0,02	-0,21	0,02	-0,24	0,02
Day-of-the-week control variables								
Sunday dummy	0,04	0,81	-0,10	0,56	0,04	0,82	-0,10	0,56
Monday dummy	0,24	0,05	0,10	0,44	0,24	0,05	0,10	0,44
Tuesday dummy	0,10	0,47	-0,05	0,72	0,10	0,47	-0,05	0,72
Wednesday dummy	0,22	0,12	0,13	0,38	0,22	0,12	0,13	0,38
Thursday dummy	0,10	0,50	-0,02	0,90	0,10	0,50	-0,02	0,90
Friday dummy	0,11	0,45	0,02	0,90	0,10	0,45	0,02	0,90
Individual control variables								
Age	0,05	0,11	-0,04	0,32	0,05	0,10	-0,04	0,32
Nett income	0,04	0,03	0,04	0,07	0,04	0,03	0,04	0,07
Urban character of place of residence	0,01	0,79	-0,02	0,53	0,01	0,79	-0,02	0,53
Partner dummy	0,10	0,33	0,06	0,64	0,10	0,33	0,06	0,64
Children dummy	0,00	0,98	0,05	0,66	0,00	0,97	0,05	0,66
Education level	-0,05	0,07	0,03	0,41	-0,05	0,07	0,03	0,42
Pessimistic-optimistic	0,07	0,23	0,02	0,79	0,07	0,24	0,02	0,80
Fixed effect control variables								
Winter dummy	0,30	0,00	0,28	0,00	0,30	0,00	0,28	0,00
Spring-summer dummy	-0,34	0,00	-0,41	0,00	-0,34	0,00	-0,41	0,00
Valid observations (3 waves)	998		994		998		994	

Table 6.8: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the S&P500 index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

Dutch AEX risk expectations

	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,03	0,39	0,06	0,14	0,03	0,34	0,06	0,13
Gender dummy	-0,12	0,14	-0,12	0,17	-0,12	0,14	-0,12	0,17
Day-of-the-week control variables								
Sunday dummy	-0,12	0,40	0,00	0,99	-0,12	0,41	0,00	0,99
Monday dummy	0,03	0,78	0,20	0,12	0,04	0,77	0,20	0,12
Tuesday dummy	0,05	0,69	0,16	0,19	0,05	0,69	0,17	0,19
Wednesday dummy	0,04	0,78	0,15	0,30	0,04	0,77	0,15	0,30
Thursday dummy	-0,13	0,37	0,04	0,78	-0,13	0,38	0,04	0,78
Friday dummy	-0,12	0,39	-0,01	0,92	-0,12	0,40	-0,01	0,93
Individual control variables								
Age	0,11	0,00	0,13	0,00	0,11	0,00	0,13	0,00
Nett income	-0,02	0,28	-0,01	0,60	-0,02	0,29	-0,01	0,60
Urban character of place of residence	-0,01	0,78	-0,04	0,14	-0,01	0,78	-0,04	0,14
Partner dummy	-0,04	0,61	0,10	0,23	-0,04	0,61	0,10	0,23
Children dummy	0,04	0,63	-0,02	0,86	0,04	0,63	-0,02	0,86
Education level	-0,04	0,14	-0,01	0,69	-0,04	0,14	-0,01	0,70
Pessimistic-optimistic	-0,05	0,33	-0,02	0,70	-0,05	0,32	-0,02	0,70
Fixed effect control variables								
Winter dummy	0,13	0,07	0,32	0,00	0,13	0,07	0,32	0,00
Spring-summer dummy	-0,79	0,00	-0,56	0,00	-0,79	0,00	-0,56	0,00
Valid observations (3 waves)	1217		1236		1217		1236	

Table 6.9: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

U.S. S&P500 risk expectations	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,00	0,92	0,00	0,99	0,00	0,98	0,00	0,94
Gender dummy	0,06	0,55	-0,02	0,88	0,06	0,55	-0,02	0,87
Day-of-the-week control variables								
Sunday dummy	-0,18	0,29	-0,26	0,10	-0,18	0,29	-0,26	0,10
Monday dummy	0,08	0,62	0,04	0,77	0,08	0,62	0,04	0,77
Tuesday dummy	-0,13	0,42	-0,13	0,37	-0,13	0,42	-0,13	0,37
Wednesday dummy	0,02	0,91	-0,09	0,55	0,02	0,91	-0,09	0,56
Thursday dummy	-0,03	0,83	-0,15	0,31	-0,03	0,83	-0,15	0,32
Friday dummy	-0,23	0,17	-0,19	0,24	-0,23	0,17	-0,19	0,24
Individual control variables								
Age	0,05	0,09	0,06	0,17	0,05	0,09	0,06	0,17
Nett income	0,00	0,79	0,01	0,64	0,00	0,79	0,01	0,64
Urban character of place of residence	-0,03	0,27	-0,01	0,66	-0,03	0,27	-0,01	0,66
Partner dummy	0,12	0,22	0,20	0,06	0,12	0,22	0,20	0,06
Children dummy	0,09	0,28	0,11	0,31	0,09	0,27	0,11	0,30
Education level	-0,04	0,12	-0,03	0,32	-0,04	0,11	-0,03	0,32
Pessimistic-optimistic	0,05	0,38	0,02	0,71	0,05	0,39	0,02	0,73
Fixed effect control variables								
Winter dummy	0,25	0,00	0,34	0,00	0,25	0,00	0,34	0,00
Spring-summer dummy	-0,37	0,00	-0,18	0,01	-0,37	0,00	-0,18	0,01
Valid observations (3 waves)	1020		1003		1020		1003	

Table 6.10: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the S&P500 index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

Dutch AEX return expectations	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	-0,02	0,81	0,07	0,50	-0,02	0,83	0,07	0,51
Gender dummy	-0,24	0,33	-0,21	0,38	-0,24	0,31	-0,22	0,33
Interaction effect: ISI*Gender	0,03	0,72	-0,04	0,56	0,03	0,70	-0,04	0,57
Day-of-the-week control variables								
Sunday dummy	-0,10	0,50	0,01	0,97	-0,10	0,49	0,01	0,96
Monday dummy	0,20	0,10	0,10	0,42	0,20	0,10	0,10	0,41
Tuesday dummy	0,06	0,64	-0,03	0,82	0,06	0,63	-0,03	0,82
Wednesday dummy	-0,05	0,70	0,07	0,61	-0,05	0,70	0,07	0,61
Thursday dummy	-0,09	0,50	0,01	0,95	-0,09	0,51	0,01	0,95
Friday dummy	-0,11	0,44	-0,05	0,72	-0,11	0,44	-0,05	0,72
Individual control variables								
Age	0,06	0,07	-0,08	0,03	0,06	0,06	-0,08	0,03
Nett income	0,01	0,50	0,04	0,06	0,01	0,49	0,04	0,06
Urban character of place of residence	0,00	0,90	-0,04	0,16	0,00	0,91	-0,04	0,16
Partner dummy	0,11	0,20	0,07	0,49	0,11	0,20	0,07	0,49
Children dummy	-0,01	0,95	0,04	0,71	0,00	0,96	0,04	0,71
Education level	-0,06	0,01	-0,01	0,82	-0,06	0,01	-0,01	0,83
Pessimistic-optimistic	-0,01	0,88	-0,03	0,60	-0,01	0,86	-0,03	0,60
Fixed effect control variables								
Winter dummy	0,20	0,00	0,25	0,00	0,20	0,00	0,25	0,00
Spring-summer dummy	-0,84	0,00	-0,67	0,00	-0,84	0,00	-0,67	0,00
Valid observations (3 waves)	1213		1235		1213		1235	

Table 6.11: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable, $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI and gender and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	U.S. S&P500 return expectations							
	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,15	0,15	-0,06	0,62	0,16	0,13	-0,05	0,65
Gender dummy	0,19	0,45	-0,36	0,20	0,17	0,48	-0,35	0,20
Interaction effect: ISI*Gender	-0,12	0,09	0,04	0,64	-0,12	0,09	0,04	0,66
Day-of-the-week control variables								
Sunday dummy	0,04	0,78	-0,10	0,55	0,04	0,78	-0,10	0,55
Monday dummy	0,25	0,04	0,10	0,45	0,25	0,04	0,10	0,45
Tuesday dummy	0,12	0,40	-0,05	0,70	0,12	0,40	-0,05	0,70
Wednesday dummy	0,24	0,10	0,12	0,40	0,24	0,10	0,12	0,40
Thursday dummy	0,10	0,51	-0,02	0,90	0,10	0,51	-0,02	0,90
Friday dummy	0,11	0,44	0,02	0,90	0,11	0,44	0,02	0,90
Individual control variables								
Age	0,05	0,12	-0,04	0,32	0,05	0,12	-0,04	0,32
Nett income	0,04	0,03	0,04	0,07	0,04	0,04	0,04	0,07
Urban character of place of residence	0,01	0,73	-0,02	0,52	0,01	0,74	-0,02	0,52
Partner dummy	0,10	0,33	0,06	0,63	0,10	0,33	0,06	0,63
Children dummy	-0,01	0,93	0,05	0,64	-0,01	0,93	0,05	0,63
Education level	-0,05	0,09	0,02	0,44	-0,05	0,09	0,02	0,44
Pessimistic-optimistic	0,07	0,22	0,02	0,79	0,07	0,23	0,02	0,80
Fixed effect control variables								
Winter dummy	0,30	0,00	0,28	0,00	0,31	0,00	0,28	0,00
Spring-summer dummy	-0,35	0,00	-0,41	0,00	-0,35	0,00	-0,41	0,00
Valid observations (3 waves)	998		994		998		994	

Table 6.12: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected return on the S&P500 index in the next month or year, $GENDER_{2,i}$ is a gender dummy variable$ISI_{1,i}$ is the Investor Sentiment Index, $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI, and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	Dutch AEX risk expectations							
	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,04	0,73	0,01	0,96	0,04	0,66	0,01	0,89
Gender dummy	-0,10	0,66	-0,25	0,33	-0,09	0,68	-0,22	0,35
Interaction effect: ISI*Gender	0,00	0,95	0,04	0,60	-0,01	0,90	0,03	0,66
Day-of-the-week control variables								
Sunday dummy	-0,12	0,40	0,00	0,99	-0,12	0,40	0,00	1,00
Monday dummy	0,03	0,78	0,20	0,12	0,04	0,77	0,20	0,12
Tuesday dummy	0,05	0,69	0,16	0,19	0,05	0,69	0,17	0,19
Wednesday dummy	0,04	0,77	0,14	0,31	0,04	0,77	0,14	0,31
Thursday dummy	-0,13	0,37	0,04	0,77	-0,13	0,38	0,04	0,76
Friday dummy	-0,12	0,39	-0,01	0,95	-0,12	0,39	-0,01	0,95
Individual control variables								
Age	0,11	0,00	0,13	0,00	0,11	0,00	0,13	0,00
Nett income	-0,02	0,29	-0,01	0,59	-0,02	0,29	-0,01	0,59
Urban character of place of residence	-0,01	0,78	-0,04	0,13	-0,01	0,78	-0,04	0,13
Partner dummy	-0,04	0,61	0,10	0,23	-0,04	0,61	0,10	0,24
Children dummy	0,04	0,64	-0,01	0,89	0,04	0,63	-0,01	0,88
Education level	-0,04	0,14	-0,01	0,68	-0,04	0,14	-0,01	0,68
Pessimistic-optimistic	-0,05	0,33	-0,02	0,71	-0,05	0,32	-0,02	0,71
Fixed effect control variables								
Winter dummy	0,13	0,07	0,32	0,00	0,13	0,07	0,32	0,00
Spring-summer dummy	-0,79	0,00	-0,56	0,00	-0,79	0,00	-0,56	0,00
Valid observations (3 waves)	1217		1236		1217		1236	

Table 6.13: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the AEX index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable, $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

U.S. S&P500 risk expectations	ISI for men				ISI for women			
	Month		Year		Month		Year	
	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,06	0,63	-0,07	0,58	0,06	0,59	-0,07	0,59
Gender dummy	0,21	0,44	-0,20	0,52	0,21	0,41	-0,19	0,52
Interaction effect: ISI*Gender	-0,05	0,56	0,05	0,56	-0,05	0,53	0,05	0,55
Day-of-the-week control variables								
Sunday dummy	-0,18	0,29	-0,26	0,10	-0,18	0,29	-0,26	0,10
Monday dummy	0,08	0,61	0,04	0,78	0,08	0,60	0,04	0,78
Tuesday dummy	-0,12	0,44	-0,13	0,36	-0,12	0,44	-0,13	0,36
Wednesday dummy	0,02	0,89	-0,10	0,54	0,02	0,89	-0,10	0,53
Thursday dummy	-0,04	0,83	-0,15	0,32	-0,04	0,83	-0,15	0,32
Friday dummy	-0,23	0,17	-0,18	0,25	-0,23	0,17	-0,18	0,24
Individual control variables								
Age	0,05	0,10	0,06	0,16	0,05	0,10	0,06	0,16
Nett income	0,00	0,81	0,01	0,65	0,00	0,81	0,01	0,64
Urban character of place of residence	-0,03	0,28	-0,02	0,64	-0,03	0,28	-0,02	0,64
Partner dummy	0,12	0,22	0,20	0,06	0,12	0,22	0,20	0,06
Children dummy	0,09	0,30	0,12	0,28	0,09	0,30	0,12	0,28
Education level	-0,04	0,12	-0,03	0,29	-0,04	0,13	-0,03	0,29
Pessimistic-optimistic	0,05	0,38	0,02	0,71	0,05	0,39	0,02	0,73
Fixed effect control variables								
Winter dummy	0,25	0,00	0,34	0,00	0,25	0,00	0,34	0,00
Spring-summer dummy	-0,37	0,00	-0,17	0,01	-0,37	0,00	-0,17	0,01
Valid observations (3 waves)	1020		1003		1020		1003	

Table 6.14: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ is the individuals expected volatility on the S&P500 index in the next month or year, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable, $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI and $CONTROLS_{k,i}$ are the control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

6.2.3 Overall sentiment effect on trading plans hypothesis

In table 6.15 we find the results from our ordered probit regression in equation (5.2), with future trading plans as the dependent variable. Here we have also added a recent trading control variable. We can see that the ISI for men and women has no significant influence on their future trading plans. What we can also see is that for men their past trading has a significant influence on their future trading. When men have bought more in the past they will also buy more in the future and when individuals were used to selling more in the past, they will also sell more in the future. For women this relationship between past and future trading is not significant. Since for this regression their were only 29 observations for women, the results for women are debatable.

In table 6.16 we find the results from our ordered probit regression in equation (5.3), with future trading plans as the dependent variable. Here we have also added a recent trading control variable. We can see that the ISI for men and women has no significant influence on their future trading plans. Gender does have a significant influence on the trading plans, males generally are more directed towards selling than women. What we can also see is that for men and women their past trading has a significant influence on their future trading. When individuals have bought more in the past they will also buy more in the future and when individuals were used to selling more in the past, they will also sell more in the future.

In table 6.17 we find the results from our ordered probit regression in equation (5.4), with future trading plans as the dependent variable. Here we have also added a recent trading control variable. Here the interaction effect is significant, and has a negative coefficient. This means that the ISI has a more towards buying directed influence on the trading plans for females than for males. What we can also see is that for men and women their past trading has a significant influence on their future trading. When individuals have bought more in the past they will also buy more in the future and when individuals were used to selling more in the past, they will also sell more in the future.

The hypothesis on overall sentiment effect on future trading was as follows: *H9: The ISI of men has a larger influence on their future investment plans than that of women.* We have not found that this is true. The ISI of both men and women have no significant influence on their future trading plans. What we did find is an interaction effect between gender and the ISI. We found that the ISI has a more towards buying directed influence on the trading plans of women than of men.

	Future trading plans			
	Men		Women	
	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,12	0,29	1,76	0,53
Recent trading control variable				
Bought-Sold	0,32	0,00	1,55	0,36
Day-of-the-week control variables				
Sunday dummy	-0,23	0,63	0,44	0,93
Monday dummy	-0,37	0,34	3,88	0,27
Tuesday dummy	0,05	0,91	-1,55	0,23
Wednesday dummy	-0,33	0,46	2,57	0,31
Thursday dummy	0,15	0,75	-2,12	0,66
Friday dummy	0,15	0,79	-3,20	0,34
Individual control variables				
Age	0,20	0,03	1,23	0,45
Nett income	0,07	0,06	0,55	0,45
Urban character of place of residence	-0,03	0,79	2,41	0,16
Partner dummy	0,33	0,17	-0,04	0,98
Children dummy	-0,09	0,74	6,10	0,41
Education level	0,01	0,91	-2,32	0,38
Pessimistic-optimistic	-0,06	0,67	-4,96	0,33
Fixed effect control variables				
Winter dummy	-0,53	0,03	4,07	0,43
Spring-summer dummy	-0,05	0,85	4,11	0,36
Valid observations (3 waves)	128		29	

Table 6.15: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 PT_{2,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ represents the individuals future trading plans regarding the balance of buying and selling, $ISI_{1,i}$ is the Investor Sentiment Index, $PT_{2,i}$ is a recent trading control variable and $CONTROLS_{k,i}$ are the other control variables. We ran this regression for men and women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

Future trading plans	ISI for men		ISI for women	
	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	0,00	0,97	0,00	1,00
Gender dummy	0,53	0,09	0,53	0,09
Recent trading control variable				
Bought-Sold	0,34	0,00	0,34	0,00
Day-of-the-week control variables				
Sunday dummy	-0,32	0,46	-0,32	0,46
Monday dummy	-0,33	0,32	-0,33	0,32
Tuesday dummy	-0,16	0,64	-0,16	0,64
Wednesday dummy	-0,27	0,47	-0,27	0,47
Thursday dummy	0,09	0,79	0,09	0,80
Friday dummy	0,01	0,99	0,01	0,98
Individual control variables				
Age	0,25	0,01	0,25	0,01
Nett income	0,05	0,20	0,05	0,21
Urban character of place of residence	0,02	0,80	0,02	0,80
Partner dummy	0,29	0,24	0,29	0,24
Children dummy	-0,05	0,86	-0,05	0,85
Education level	-0,09	0,29	-0,09	0,29
Pessimistic-optimistic	-0,13	0,27	-0,13	0,28
Fixed effect control variables				
Winter dummy	-0,50	0,03	-0,50	0,03
Spring-summer dummy	-0,07	0,74	-0,07	0,74
Valid observations (3 waves)	157		157	

Table 6.16: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 PT_{3,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ represents the individuals future trading plans regarding the balance of buying and selling, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable, $PT_{3,i}$ is a recent trading control variable and $CONTROLS_{k,i}$ are the other control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

	Future trading plans			
	ISI for men		ISI for women	
	Coeff.	Sign.	Coeff.	Sign.
Individual Sentiment Index (ISI)	1,05	0,00	1,05	0,00
Gender dummy	3,54	0,00	3,34	0,00
Interaction effect: ISI*Gender	-0,93	0,00	-0,92	0,00
Recent trading control variable				
Bought-Sold	0,33	0,00	0,33	0,00
Day-of-the-week control variables				
Sunday dummy	-0,27	0,53	-0,27	0,53
Monday dummy	-0,34	0,32	-0,35	0,31
Tuesday dummy	-0,02	0,96	-0,02	0,96
Wednesday dummy	-0,24	0,53	-0,24	0,53
Thursday dummy	0,10	0,78	0,12	0,75
Friday dummy	0,18	0,71	0,17	0,72
Individual control variables				
Age	0,21	0,02	0,21	0,02
Nett income	0,06	0,13	0,06	0,13
Urban character of place of residence	0,06	0,48	0,06	0,50
Partner dummy	0,31	0,19	0,31	0,18
Children dummy	-0,24	0,34	-0,25	0,34
Education level	-0,03	0,75	-0,03	0,74
Pessimistic-optimistic	-0,04	0,74	-0,04	0,72
Fixed effect control variables				
Winter dummy	-0,50	0,03	-0,50	0,03
Spring-summer dummy	0,02	0,93	0,02	0,92
Valid observations (3 waves)	157		157	

Table 6.17: This table reports the following ordered probit regression results $E(R_{t+1,i}) = \beta_0 + \beta_1 ISI_{1,i} + \beta_2 GENDER_{2,i} + \beta_3 ISI * GENDER_{3,i} + \beta_4 PT_{4,i} + \sum_k \beta_k CONTROLS_{k,i} + \varepsilon_i$, where $E(R_{t+1,i})$ represents the individuals future trading plans regarding the balance of buying and selling, $ISI_{1,i}$ is the Investor Sentiment Index, $GENDER_{2,i}$ is a gender dummy variable, $ISI * GENDER_{3,i}$ is a variable describing the interaction between the ISI, $PT_{4,i}$ is a recent trading control variable and $CONTROLS_{k,i}$ are the other control variables. We ran this regression for the ISI for men and ISI for women separately. Valid observations incorporate the total number of complete questionnaires, less individuals who have selected a non-quantitative choice (don't know/ no opinion).

Chapter 7

Conclusion

In this study, we have tested the relation between various sentiment-creating factors, gender and risk and return expectations, as well as future trading plans of individuals that invest in the stock market. The statistical analyses are based on 2058 questionnaires completed by 808 individuals, who are a representative sample of the population of the Netherlands. The questionnaire has been taken in three waves, in November, February and June, allowing us to test the effect of SAD for men and women on risk and return expectations in different seasons. The risk and return expectations of the individuals are asked for a local index, the AEX index and a U.S. index, the S&P500 index.

In our descriptive analysis we have tested on gender differences in risk and return expectations and in sentiment-creating variables. We find that men expect higher returns and a lower volatility than women, especially for larger time spans. We have also found that men tend to trade more than women. When testing gender differences in the sentiment-creating variables, we find that there is no difference in the reported general feeling of men and women. We also find that men have a favorite sports team more often than women and that there is no difference in weather perception between men and women. Lastly, we found that men suffer less from SAD than women.

We have combined the separate sentiment-creating variables into one sentiment index (ISI), for men and women separately. We have found that this sentiment index has no influence on the expected risk and return for men and for women on both the AEX and the S&P500 index. We did find an interaction effect between the sentiment index and gender for future trading plans. The ISI has a more towards buying directed influence on trading plans for women than for men.

It could be that we find no gender differences in influence of sentiment on expected risk and return because of selection bias. Selection bias means an error in choosing the individuals to take part in our study. We have only selected individuals that invested in the stock market. Not many women invest in the

stock market, and it could be that the women that do are less risk averse than other women. This would influence our results to not finding a gender difference in investor sentiment where there actually is one.

Concluding, we find no differences in risk and return expectations men and women due to sentiment-creating factors. We do find gender differences in risk and return expectations, but these do not seem to be correlated to the gender differences in sentiment. We do find a different influence of sentiment on trading plans for men and women.

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Appendix A

Data

A.1 Questionnaire, source:[15]

This appendix contains questions that we submitted to the members of the LISS panel. The original questionnaire was in Dutch and it is available from the authors on request.

Question A (Stock holder screening question)
What is the approximate total value of stocks in your current financial investment portfolio? Stocks are defined as stocks of individual firms and investments in equity mutual funds (including mutual funds that do not only invest in stocks, but also in other financial securities, for example bonds). They exclude investments in "investment mortgages". The total value is:
1 = I don't have any investments in stocks
2 = 0-20,000 Euro
3 = 20,001-40,000 Euro
4 = 40,001-60,000 Euro
5 = 60,001-80,000 Euro
6 = 80,001-100,000 Euro
7 = 100,001-150,000 Euro
8 = 150,001-200,000 Euro
9 = 200,001+ Euro

The remainder of the questionnaire only went to respondents that answered 2-9 on this question (thus, we excluded investors who don't have any stocks).

Question B
What percentage of your investment portfolio is held in stocks? Stocks are defined as stocks of individual firms and investments in equity mutual funds (including mutual funds that do not only invest in stocks, but also in other financial securities, for example bonds). They exclude investments in "investment mortgages". The total investment portfolio is defined as the sum of all your financial investments, such as stocks, bonds, savings accounts, checking accounts, cash, etc. (excluding your main residence and other property holdings).
1 = 0%-20%
2 = 21%-40%
3 = 41%-60%
4 = 61%-80%
5= more than 80%

Questions C, D (Next month return expectations questions)

What is your best forecast for the rate of return on the Dutch stock market as measured by the AEX index for the coming month (the AEX index consists of 25 Dutch stocks that are representative of Euronext Amsterdam, formerly known as the Amsterdam Stock Exchange)?

What is your best forecast for the rate of return on the U.S. S&P 500 index for the next coming month (the U.S. S&P 500 index is a basket of 500 U.S. stocks that is representative of the American stock market)?

1 = -4% or worse
2 = -4% to -2%
3 = -2% to 0%
4 = 0% to 2%
5 = 2% to 4%

6 = 4% or better
7 = Don't know/no opinion

Questions E, F (Next year return expectations questions)

What is your best forecast for the rate of return on the Dutch AEX index for the coming year (the AEX index consists of 25 Dutch stocks that are representative of Euronext Amsterdam, formerly known as the Amsterdam Stock Exchange)?

What is your best forecast for the rate of return on the U.S. S&P 500 index for the next coming year (the U.S. S&P 500 index is a basket of 500 U.S. stocks that is representative of the American stock market)?

1 = -15% or worse
2 = -15% to -10%
3 = -10% to -5%
4 = -5% to 0%
4 = 0% to 5%
5 = 5% to 10%
6 = 10% to 15%
7 = 15% or better
8 = Don't know/no opinion

Questions G, H, I, J (Volatility expectations questions)

How do you consider the Netherlands stock market risk (volatility) for the coming month relative to an average month (the degree of risk means by how much the market is expected to fluctuate)?

How do you consider the Netherlands stock market risk (volatility) for the coming year relative to an average year (the degree of risk means by how much the market is expected to fluctuate)?

How do you consider the U.S. stock market risk (volatility) for the coming month relative to an average month (the degree of risk means by how much the market is expected to fluctuate)?

How do you consider the U.S. stock market risk (volatility) for the coming year relative to an average year (the degree of risk means by how much the market is expected to fluctuate)?

1 = Much less risky
2 = Somewhat less risky
3 = Similar risk to other months
4 = Somewhat riskier
5 = Much riskier
6 = Don't know/no opinion

Questions K, L, M (Sport fan questions)
Are you a fan or a supporter of a sport club or individual sportsperson?
1 = Yes
2 = No
With which sport is this club or sportsperson associated?

If you are a supporter of multiple clubs or sportspersons, then please choose the club or sportsperson that you follow the most.
1 = Soccer
2 = Tennis
3 = Speed skating
4 = Grass hockey
5 = Cycling
6 = Swimming
7 = Darts
8 = Other (please specify)
9 = Not a sport fan (skip next question)

If your favorite sport team (person) has played in the last three days, how do you consider the game result?
1 = The result was good in an important game/tournament
2 = The result was good in a not very important game/tournament
3 = The result was neither good nor bad
4 = The result was bad in a not very important game/tournament
5 = The result was bad in an important game/tournament
6 = Not relevant (no game played or not a sport fan)

Question N (Weather question)
How would you describe the weather in the last two days?
1 = Very good
2 = Good
3 = Not particularly good and not particularly bad
4 = Bad
5 = Very bad

Question O (Spring preference question)
Do you generally feel better in the autumn or in the spring?
1 = I generally feel much better in the autumn
4 = I generally feel the same in the autumn as in the spring
7 = I generally feel much better in the spring

Question P (Winter Blues question)
Do you (ever) suffer from "Winter Blues"? Winter Blues is a disorder that occurs in the autumn and early winter and is characterized by symptoms such as difficulty concentrating, social withdrawal, loss of energy, sleep disturbance and other related symptoms.
1 = I don't suffer from Winter Blues at all
2 = I mildly suffer from Winter Blues
3 = I suffer from Winter Blues
4 = I strongly suffer from Winter Blues

Question Q (General feeling question)
At the moment, which sentence best describes your feelings?
1 = I feel great today
2 = I feel good today
3 = I feel normal (neither good nor bad) today
4 = I feel bad today

5 = I feel very bad today

Question R (Optimism-pessimism question)
In general, how do you consider yourself relative to other people?
1 = I am a very positive person relative to other people
2 = I am a more positive person relative to other people
3 = I am neither a more positive person nor a less positive person relative to other people
4 = I am a less positive person relative to other people
5 = I am a much less positive person relative to other people

Questions S, T (Past and planned investments questions)

If you made transactions in your stocks holdings during the last month, did you mostly buy or sell stocks? The term "mostly" should be interpreted in terms of the total monetary value of the transaction (amount of stocks times price of stock)
1 = I only bought stocks
2 = I mostly bought stocks, but I also sold stocks
3 = I bought as many stocks as I sold
4 = I mostly sold stocks, but I also bought stocks
5 = I only sold stocks
6 = Not relevant (I did not make any stock transactions)

In the next few days, do you intend to mostly buy or sell stocks? The term "mostly" should be interpreted in terms of the total monetary value of the transaction (amount of stocks times price of stock):
1 = I intend to only buy stocks
2 = I intend to mostly buy stocks, but I also intend to sell stocks
3 = I intend to buy as many stocks as I intend to sell
4 = I intend to mostly sell stocks, but I also intend to buy stocks
5 = I only intend to sell stocks
6 = Not relevant (Currently I do not intend to make any stock transactions)

Appendix B

Descriptive analysis tests - November

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	106	0.96647	2.906	2.374	0.00879

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	41	0.92551	3.001	2.316	0.01027

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.509434	1.5445467	106
Female	2.1707317	1.4474536	41
Total	2.414966	1.5208304	147

W0 = 0.81382625 df(1, 145) Pr > F = 0.36848752

W50 = 0.19444126 df(1, 145) Pr > F = 0.65990238

W10 = 0.81382625 df(1, 145) Pr > F = 0.36848752

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	106	8134	7844
Female	41	2744	3034
combined	147	10878	10878

unadjusted variance 53600.67
adjustment for ties -4658.96

adjusted variance 48941.71

Ho: dt10a003(geslacht==Male) = dt10a003(geslacht==Female)
z = 1.311
Prob > |z| = 0.1899

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	106	2.509434	.1500196	1.544547	2.211973	2.806895
Female	41	2.170732	.2260543	1.447454	1.713859	2.627604
combined	147	2.414966	.125436	1.52083	2.167061	2.662871
diff		.3387023	.2792512		-.2132264	.8906309

diff = mean(Male) - mean(Female) t = 1.2129
Ho: diff = 0 degrees of freedom = 145

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8864 Pr(|T| > |t|) = 0.2271 Pr(T > t) = 0.1136

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.1348	0.341	
Combined K-S:	0.1348	0.656	0.578

(f) Kolmogorov-Smirnov test

Figure B.1: Results of all statistical tests done on the variable 'past trading', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	78	0.97751	1.512	0.904	0.18287

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	28	0.96860	0.948	-0.110	0.54365

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.5641026	1.5083296	78
Female	2.6785714	1.6789232	28
Total	2.5943396	1.5478298	106

W0 = 1.49822203 df(1, 104) Pr > F = 0.22371084

W50 = 0.70624674 df(1, 104) Pr > F = 0.40262055

W10 = 1.49822203 df(1, 104) Pr > F = 0.22371084

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	78	2.564103	.1707847	1.50833	2.224027	2.904178
Female	28	2.678571	.3172867	1.678923	2.027553	3.32959
combined	106	2.59434	.1503385	1.54783	2.296246	2.892433
diff		-.1144689	.342448		-.7935561	.5646184

diff = mean(Male) - mean(Female) t = -0.3343

Ho: diff = 0 degrees of freedom = 104

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.3694 Pr(|T| > |t|) = 0.7389 Pr(T > t) = 0.6306

(d) T-test

Figure B.2: Results of all statistical tests done on the variable 'future trading', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	410	0.98320	4.729	3.701	0.00011

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	168	0.96839	4.054	3.192	0.00071

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.1878049	.90710187	410
Female	4.1071429	.96051205	168
Total	4.1643599	.9228336	578

W0 = 0.04635515 df(1, 576) Pr > F = 0.82960771

W50 = 0.03376149 df(1, 576) Pr > F = 0.85427973

W10 = 0.00076203 df(1, 576) Pr > F = 0.97798688

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	410	120131	118695
Female	168	47200	48636
combined	578	167331	167331

unadjusted variance 3323460.00
adjustment for ties -585917.64

adjusted variance 2737542.36

Ho: dt10a005(geslacht==Male) = dt10a005(geslacht==Female)
z = 0.868
Prob > |z| = 0.3854

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	410	4.187805	.0447986	.9071019	4.099741	4.275869
Female	168	4.107143	.0741051	.9605121	3.960839	4.253446
combined	578	4.16436	.0383848	.9228336	4.088969	4.239751
diff		.080662	.0845424		-.0853869	.246711

diff = mean(Male) - mean(Female) t = 0.9541
Ho: diff = 0 degrees of freedom = 576

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8298 Pr(|T| > |t|) = 0.3404 Pr(T > t) = 0.1702

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.0276	0.834	
Combined K-S:	0.0276	1.000	1.000

(f) Kolmogorov-Smirnov test

Figure B.3: Results of all statistical tests done on the variable 'next month return expectations AEX', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	424	0.95240	13.805	6.263	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	174	0.97279	3.597	2.924	0.00173

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.365566	.89961545	424
Female	5.1494253	.67196091	174
Total	5.3026756	.8449433	598

W0 = 25.683470 df(1, 596) Pr > F = 0.00000054

W50 = 13.731672 df(1, 596) Pr > F = 0.0002305

W10 = 17.313266 df(1, 596) Pr > F = 0.00003636

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	424	132128.5	126988
Female	174	46972.5	52113
combined	598	179101	179101

unadjusted variance 3682652.00
adjustment for ties -886665.78

adjusted variance 2795986.22

Ho: dt10a006(geslacht==Male) = dt10a006(geslacht==Female)
z = 3.074
Prob > |z| = 0.0021

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	424	5.365566	.0436892	.8996154	5.279691	5.451441
Female	174	5.149425	.0509412	.6719609	5.048879	5.249972
combined	598	5.302676	.0345523	.8449433	5.234817	5.370534
diff		.2161408	.0756185		.0676296	.3646519

diff = mean(Male) - mean(Female) t = 2.8583
Ho: diff = 0 degrees of freedom = 596

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9978 Pr(|T| > |t|) = 0.0044 Pr(T > t) = 0.0022

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0146	0.949	
Female:	-0.1482	0.004	
Combined K-S:	0.1482	0.009	0.007

(f) Kolmogorov-Smirnov test

Figure B.4: Results of all statistical tests done on the variable 'next year return expectations AEX', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	350	0.98533	3.585	3.019	0.00127

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	136	0.98643	1.452	0.841	0.20017

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.0457143	.98013006	350
Female	3.9044118	1.031925	136
Total	4.0061728	.99584858	486

W0 = 0.72683897 df(1, 484) Pr > F = 0.3943314

W50 = 0.33220778 df(1, 484) Pr > F = 0.56462988

W10 = 0.73375924 df(1, 484) Pr > F = 0.39209128

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	350	87303	85225
Female	136	31038	33116
combined	486	118341	118341

unadjusted variance 1931766.67
adjustment for ties -262112.51

adjusted variance 1669654.16

Ho: dt10a007(geslacht==Male) = dt10a007(geslacht==Female)
z = 1.608
Prob > |z| = 0.1078

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	350	4.045714	.0523902	.9801301	3.942674	4.148754
Female	136	3.904412	.0884868	1.031925	3.729412	4.079412
combined	486	4.006173	.0451726	.9958486	3.917415	4.094931
diff		.1413025	.1005244		-.0562156	.3388206

diff = mean(Male) - mean(Female) t = 1.4057
Ho: diff = 0 degrees of freedom = 484

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9198 Pr(|T| > |t|) = 0.1605 Pr(T > t) = 0.0802

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0050	0.995	
Female:	-0.0684	0.400	
Combined K-S:	0.0684	0.749	0.717

(f) Kolmogorov-Smirnov test

Figure B.5: Results of all statistical tests done on the variable 'next month return expectations S&P 500', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	351	0.97675	5.696	4.115	0.00002

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	136	0.97434	2.746	2.278	0.01136

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.1823362	.99474402	351
Female	4.9779412	.75490408	136
Total	5.1252567	.93773142	487

W0 = 14.1656490 df(1, 485) Pr > F = 0.0001879

W50 = 7.0331787 df(1, 485) Pr > F = 0.00826338

W10 = 10.1169177 df(1, 485) Pr > F = 0.00156324

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	351	88344.5	85644
Female	136	30483.5	33184
combined	487	118828	118828

unadjusted variance 1941264.00
adjustment for ties -371163.52

adjusted variance 1570100.48

Ho: dt10a008(geslacht==Male) = dt10a008(geslacht==Female)
z = 2.155
Prob > |z| = 0.0311

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	351	5.182336	.0530955	.994744	5.07791	5.286763
Female	136	4.977941	.0647325	.7549041	4.84992	5.105962
combined	487	5.125257	.0424927	.9377314	5.041765	5.208749
diff		.204395	.0943575		.018995	.389795

diff = mean(Male) - mean(Female) t = 2.1662
Ho: diff = 0 degrees of freedom = 485

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9846 Pr(|T| > |t|) = 0.0308 Pr(T > t) = 0.0154

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0076	0.989	
Female:	-0.1153	0.074	
Combined K-S:	0.1153	0.147	0.134

(f) Kolmogorov-Smirnov test

Figure B.6: Results of all statistical tests done on the variable 'next year return expectations S&P 500', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	402	0.99975	0.070	-6.333	1.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	182	0.98460	2.117	1.718	0.04292

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.0522388	.72004257	402
Female	2.8956044	.71687044	182
Total	3.0034247	.72210046	584

W0 = 0.00466734 df(1, 582) Pr > F = 0.94555602

W50 = 0.28343687 df(1, 582) Pr > F = 0.59466055

W10 = 0.49181265 df(1, 582) Pr > F = 0.48340014

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	402	121143.5	117585
Female	182	49676.5	53235
combined	584	170820	170820

unadjusted variance 3566745.00
adjustment for ties -804339.52

adjusted variance 2762405.48

Ho: dt10a009(geslacht==Male) = dt10a009(geslacht==Female)
z = 2.141
Prob > |z| = 0.0323

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	402	3.052239	.0359125	.7200426	2.981639	3.122839
Female	182	2.895604	.053138	.7168704	2.790755	3.000454
combined	584	3.003425	.0298807	.7221005	2.944738	3.062112
diff		.1566344	.0642423		.0304593	.2828095

diff = mean(Male) - mean(Female) t = 2.4382
Ho: diff = 0 degrees of freedom = 582

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9925 Pr(|T| > |t|) = 0.0151 Pr(T > t) = 0.0075

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.0775	0.222	
Combined K-S:	0.0775	0.439	0.413

(f) Kolmogorov-Smirnov test

Figure B.7: Results of all statistical tests done on the variable 'next month risk expectations AEX', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	409	0.99467	1.495	0.959	0.16887

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	180	0.98672	1.808	1.356	0.08762

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.0366748	.90267831	409
Female	2.8722222	.80522425	180
Total	2.9864177	.87665426	589

W0 = 1.7462291 df(1, 587) Pr > F = 0.1868663

W50 = 3.5746284 df(1, 587) Pr > F = 0.05916081

W10 = 3.8889790 df(1, 587) Pr > F = 0.04907299

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	409	3.036675	.0446346	.9026783	2.948932	3.124417
Female	180	2.872222	.0600179	.8052243	2.753789	2.990656
combined	589	2.986418	.0361219	.8766543	2.915474	3.057361
diff		.1644526	.0781857		.0108949	.3180103

diff = mean(Male) - mean(Female) t = 2.1034

Ho: diff = 0 degrees of freedom = 587

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.9821 Pr(|T| > |t|) = 0.0359 Pr(T > t) = 0.0179

(d) T-test

Figure B.8: Results of all statistical tests done on the variable 'next year risk expectations AEX', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	350	0.99349	1.590	1.097	0.13636

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	141	0.99193	0.891	-0.261	0.60283

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.74	.83843899	350
Female	2.751773	.82942345	141
Total	2.7433809	.83503145	491

W0 = 0.34791405 df(1, 489) Pr > F = 0.55556875

W50 = 0.39879361 df(1, 489) Pr > F = 0.52800803

W10 = 0.36733178 df(1, 489) Pr > F = 0.54474351

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	350	2.74	.0448164	.838439	2.651856	2.828144
Female	141	2.751773	.0698501	.8294235	2.613676	2.88987
combined	491	2.743381	.0376844	.8350315	2.669338	2.817424
diff		-.011773	.0833748		-.1755901	.152044

diff = mean(Male) - mean(Female) t = -0.1412

Ho: diff = 0 degrees of freedom = 489

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.4439 Pr(|T| > |t|) = 0.8878 Pr(T > t) = 0.5561

(d) T-test

Figure B.9: Results of all statistical tests done on the variable 'next month risk expectations S&P 500', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	352	0.99063	2.302	1.972	0.02432

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	136	0.99738	0.281	-2.864	0.99791

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.7215909	.96773579	352
Female	2.6176471	.90315352	136
Total	2.692623	.95040621	488

W0 = 0.83321695 df(1, 486) Pr > F = 0.36179654

W50 = 0.84473572 df(1, 486) Pr > F = 0.35850178

W10 = 1.06880178 df(1, 486) Pr > F = 0.30173041

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	352	87314.5	86064
Female	136	32001.5	33252
combined	488	119316	119316

unadjusted variance 1950784.00
adjustment for ties -174199.52

adjusted variance 1776584.48

Ho: dt10a012(geslacht==Male) = dt10a012(geslacht==Female)
z = 0.938
Prob > |z| = 0.3481

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	352	2.721591	.0515805	.9677358	2.620145	2.823037
Female	136	2.617647	.0774448	.9031535	2.464485	2.770809
combined	488	2.692623	.0430229	.9504062	2.60809	2.777156
diff		.1039439	.0959403		-.0845651	.2924528

diff = mean(Male) - mean(Female) t = 1.0834
Ho: diff = 0 degrees of freedom = 486

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8604 Pr(|T| > |t|) = 0.2792 Pr(T > t) = 0.1396

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.0683	0.400	
Combined K-S:	0.0683	0.749	0.718

(f) Kolmogorov-Smirnov test

Figure B.10: Results of all statistical tests done on the variable 'next year risk expectations S&P 500', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	144	0.99398	0.676	-0.884	0.81171

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	31	0.95648	1.418	0.723	0.23486

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.1111111	1.6476774	144
Female	2.5483871	1.545719	31
Total	3.0114286	1.6399768	175

W0 = 0.34651088 df(1, 173) Pr > F = 0.55686268

W50 = 0.56336632 df(1, 173) Pr > F = 0.45392673

W10 = 0.34651088 df(1, 173) Pr > F = 0.55686268

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	144	3.111111	.1373064	1.647677	2.839699	3.382524
Female	31	2.548387	.2776193	1.545719	1.981413	3.115361
combined	175	3.011429	.1239706	1.639977	2.766749	3.256108
diff		.562724	.3228237		-.0744562	1.199904

diff = mean(Male) - mean(Female) t = 1.7431

Ho: diff = 0 degrees of freedom = 173

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.9585 Pr(|T| > |t|) = 0.0831 Pr(T > t) = 0.0415

(d) T-test

Figure B.11: Results of all statistical tests done on the variable 'Favorite sports team's performance', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	476	0.99967	0.107	-5.368	1.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	262	0.99907	0.175	-4.059	0.99998

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.0609244	.74725208	476
Female	3.0839695	.87571027	262
Total	3.0691057	.79472106	738

W0 = 6.3636295 df(1, 736) Pr > F = 0.01185801

W50 = 4.9479992 df(1, 736) Pr > F = 0.02642345

W10 = 4.5453076 df(1, 736) Pr > F = 0.03333961

(c) Levene's test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	476	3.060924	.0342502	.7472521	2.993624	3.128225
Female	262	3.083969	.0541016	.8757103	2.977438	3.190501
combined	738	3.069106	.0292541	.7947211	3.011674	3.126537
diff		-.0230451	.0640317		-.1488685	.1027783

diff = mean(Male) - mean(Female) t = -0.3599

Ho: diff = 0 Satterthwaite's degrees of freedom = 470.597

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.3595 Pr(|T| > |t|) = 0.7191 Pr(T > t) = 0.6405

(d) T-test

Figure B.12: Results of all statistical tests done on the variable 'Current weather perception', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	476	0.97563	7.843	4.940	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	262	0.96884	5.889	4.135	0.00002

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.210084	1.2113425	476
Female	5.3206107	1.3688778	262
Total	5.2493225	1.2696887	738

W0 = 8.0986701 df(1, 736) Pr > F = 0.00455295

W50 = 7.2245474 df(1, 736) Pr > F = 0.00735384

W10 = 8.2416545 df(1, 736) Pr > F = 0.00421152

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	476	172084	175882
Female	262	100607	96809
combined	738	272691	272691

unadjusted variance 7680180.67
adjustment for ties -499657.74

adjusted variance 7180522.93

Ho: dt10a018(geslacht==Male) = dt10a018(geslacht==Female)
z = -1.417
Prob > |z| = 0.1564

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	476	5.210084	.0555218	1.211343	5.100985	5.319183
Female	262	5.320611	.0845696	1.368878	5.154085	5.487136
combined	738	5.249322	.0467379	1.269689	5.157567	5.341078
diff		-.1105267	.1011666		-.3093056	.0882523

diff = mean(Male) - mean(Female) t = -1.0925
Ho: diff = 0 Satterthwaite's degrees of freedom = 484.975

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1376 Pr(|T| > |t|) = 0.2751 Pr(T > t) = 0.8624

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0811	0.108	
Female:	-0.0183	0.893	
Combined K-S:	0.0811	0.216	0.202

(f) Kolmogorov-Smirnov test

Figure B.13: Results of all statistical tests done on the variable 'spring-autumn preference', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	476	0.94637	17.260	6.832	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	262	0.95324	8.839	5.082	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	1.4516807	.70171017	476
Female	1.6068702	.76440855	262
Total	1.5067751	.7278769	738

W0 = 4.2375592 df(1, 736) Pr > F = 0.03989044

W50 = 7.7521423 df(1, 736) Pr > F = 0.00550263

W10 = 7.9087620 df(1, 736) Pr > F = 0.00505059

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	476	168582.5	175882
Female	262	104108.5	96809
combined	738	272691	272691

unadjusted variance 7680180.67
adjustment for ties -1.93e+06

adjusted variance 5750429.70

Ho: dt10a019(geslacht==Male) = dt10a019(geslacht==Female)
z = -3.044
Prob > |z| = 0.0023

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	476	1.451681	.0321628	.7017102	1.388482	1.51488
Female	262	1.60687	.0472253	.7644086	1.513879	1.699861
combined	738	1.506775	.0267935	.7278769	1.454174	1.559376
diff		-.1551896	.0571374		-.2674484	-.0429307

diff = mean(Male) - mean(Female) t = -2.7161
Ho: diff = 0 Satterthwaite's degrees of freedom = 500.147

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0034 Pr(|T| > |t|) = 0.0068 Pr(T > t) = 0.9966

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1123	0.014	
Female:	0.0000	1.000	
Combined K-S:	0.1123	0.028	0.025

(f) Kolmogorov-Smirnov test

Figure B.14: Results of all statistical tests done on the variable 'suffering from winter blues', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	476	0.99493	1.631	1.173	0.12032

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	262	0.98819	2.232	1.873	0.03055

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.5084034	.61723729	476
Female	2.5725191	.6896113	262
Total	2.5311653	.64412932	738

W0 = 2.8497419 df(1, 736) Pr > F = 0.09181225

W50 = 1.4580274 df(1, 736) Pr > F = 0.22763214

W10 = 3.2265940 df(1, 736) Pr > F = 0.07286122

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	476	173410	175882
Female	262	99281	96809
combined	738	272691	272691

unadjusted variance 7680180.67
adjustment for ties -1.54e+06

adjusted variance 6135430.47

Ho: dt10a020(geslacht==Male) = dt10a020(geslacht==Female)
z = -0.998
Prob > |z| = 0.3183

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	476	2.508403	.028291	.6172373	2.452812	2.563994
Female	262	2.572519	.0426043	.6896113	2.488627	2.656411
combined	738	2.531165	.0237107	.6441293	2.484617	2.577714
diff		-.0641157	.0495277		-.1613481	.0331167

diff = mean(Male) - mean(Female) t = -1.2945
Ho: diff = 0 degrees of freedom = 736

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0979 Pr(|T| > |t|) = 0.1959 Pr(T > t) = 0.9021

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0307	0.727	
Female:	-0.0023	0.998	
Combined K-S:	0.0307	0.997	0.995

(f) Kolmogorov-Smirnov test

Figure B.15: Results of all statistical tests done on the variable 'currently feeling (mood)', for the questionnaire filled in in November.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	476	0.99359	2.062	1.736	0.04126

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	262	0.99733	0.505	-1.595	0.94464

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.6764706	.71107994	476
Female	2.5877863	.67090868	262
Total	2.6449864	.69791942	738

W0 = 0.17850792 df(1, 736) Pr > F = 0.67278206

W50 = 0.05902359 df(1, 736) Pr > F = 0.8081136

W10 = 0.00697725 df(1, 736) Pr > F = 0.9334529

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	476	179628.5	175882
Female	262	93062.5	96809
combined	738	272691	272691

unadjusted variance 7680180.67
adjustment for ties -1.33e+06

adjusted variance 6350824.91

Ho: dt10a021(geslacht==Male) = dt10a021(geslacht==Female)
z = 1.487
Prob > |z| = 0.1371

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	476	2.676471	.0325923	.7110799	2.612428	2.740513
Female	262	2.587786	.0414489	.6709087	2.506169	2.669403
combined	738	2.644986	.0256908	.6979194	2.594551	2.695422
diff		.0886843	.0536252		-.0165922	.1939609

diff = mean(Male) - mean(Female) t = 1.6538
Ho: diff = 0 degrees of freedom = 736

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9507 Pr(|T| > |t|) = 0.0986 Pr(T > t) = 0.0493

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.0438	0.523	
Combined K-S:	0.0438	0.903	0.884

(f) Kolmogorov-Smirnov test

Figure B.16: Results of all statistical tests done on the variable 'general feeling: optimistic-pessimistic', for the questionnaire filled in in November.

Appendix C

Descriptive analysis tests - February

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	120	0.97275	2.622	2.160	0.01540

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	38	0.96902	1.177	0.342	0.36615

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.575	1.5806737	120
Female	2.7105263	1.738404	38
Total	2.6075949	1.615354	158

W0 = 1.70510114 df(1, 156) Pr > F = 0.19354453

W50 = 0.80245761 df(1, 156) Pr > F = 0.37173978

W10 = 1.70510114 df(1, 156) Pr > F = 0.19354453

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	120	9470.5	9540
Female	38	3090.5	3021
combined	158	12561	12561

unadjusted variance 60420.00
adjustment for ties -4741.80

adjusted variance 55678.20

Ho: dt10a003(geslacht==Male) = dt10a003(geslacht==Female)
z = -0.295
Prob > |z| = 0.7683

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	120	2.575	.1442951	1.580674	2.289281	2.860719
Female	38	2.710526	.2820064	1.738404	2.139127	3.281925
combined	158	2.607595	.1285107	1.615354	2.353762	2.861428
diff		-.1355263	.3014534		-.7309835	.4599309

diff = mean(Male) - mean(Female) t = -0.4496
Ho: diff = 0 degrees of freedom = 156

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.3268 Pr(|T| > |t|) = 0.6536 Pr(T > t) = 0.6732

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0908	0.621	
Female:	-0.0197	0.978	
Combined K-S:	0.0908	0.971	0.949

(f) Kolmogorov-Smirnov test

Figure C.1: Results of all statistical tests done on the variable 'past trading', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	90	0.94682	4.022	3.070	0.00107

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	18	0.96029	0.873	-0.272	0.60729

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.1888889	1.3145208	90
Female	2.7222222	1.7423971	18
Total	2.2777778	1.399822	108

W0 = 7.1944462 df(1, 106) Pr > F = 0.00848455

W50 = 4.4453687 df(1, 106) Pr > F = 0.03735265

W10 = 6.5052638 df(1, 106) Pr > F = 0.012184

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	90	4789	4905
Female	18	1097	981
combined	108	5886	5886

unadjusted variance 14715.00
adjustment for ties -1285.09

adjusted variance 13429.91

Ho: dt10a004(geslacht==Male) = dt10a004(geslacht==Female)
z = -1.001
Prob > |z| = 0.3168

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	90	2.188889	.1385627	1.314521	1.913568	2.46421
Female	18	2.722222	.4106869	1.742397	1.855749	3.588696
combined	108	2.277778	.1346979	1.399822	2.010755	2.544801
diff		-.5333333	.4334321		-1.434604	.3679375

diff = mean(Male) - mean(Female) t = -1.2305
Ho: diff = 0 Satterthwaite's degrees of freedom = 21.0386

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1160 Pr(|T| > |t|) = 0.2321 Pr(T > t) = 0.8840

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.2222	0.227	
Female:	0.0000	1.000	
Combined K-S:	0.2222	0.449	0.413

(f) Kolmogorov-Smirnov test

Figure C.2: Results of all statistical tests done on the variable 'future trading', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	372	0.96872	8.070	4.952	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	157	0.95623	5.296	3.788	0.00008

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.3655914	.93779516	372
Female	4.044586	1.0336886	157
Total	4.2703214	.97734183	529

W0 = 1.75844531 df(1, 527) Pr > F = 0.18539299

W50 = 0.41207286 df(1, 527) Pr > F = 0.52119839

W10 = 0.23181053 df(1, 527) Pr > F = 0.63038444

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	372	103565	98580
Female	157	36620	41605
combined	529	140185	140185

unadjusted variance 2579510.00
adjustment for ties -389271.97

adjusted variance 2190238.03

Ho: dt10a005(geslacht==Male) = dt10a005(geslacht==Female)
z = 3.368
Prob > |z| = 0.0008

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	372	4.365591	.0486224	.9377952	4.269981	4.461201
Female	157	4.044586	.0824973	1.033689	3.88163	4.207542
combined	529	4.270321	.0424931	.9773418	4.186845	4.353798
diff		.3210054	.0920472		.140181	.5018298

diff = mean(Male) - mean(Female) t = 3.4874
Ho: diff = 0 degrees of freedom = 527

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9997 Pr(|T| > |t|) = 0.0005 Pr(T > t) = 0.0003

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.1381	0.015	
Combined K-S:	0.1381	0.030	0.026

(f) Kolmogorov-Smirnov test

Figure C.3: Results of all statistical tests done on the variable 'next month return expectations AEX', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	377	0.98520	3.863	3.207	0.00067

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	158	0.95108	5.951	4.054	0.00003

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.5994695	.76929073	377
Female	5.1708861	.79962601	158
Total	5.4728972	.80186698	535

W0 = 8.8485164 df(1, 533) Pr > F = 0.0030662

W50 = 10.1483689 df(1, 533) Pr > F = 0.00152882

W10 = 10.6882154 df(1, 533) Pr > F = 0.00114779

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	377	109505	101036
Female	158	33875	42344
combined	535	143380	143380

unadjusted variance 2660614.67
adjustment for ties -491290.86

adjusted variance 2169323.81

Ho: dt10a006(geslacht==Male) = dt10a006(geslacht==Female)
z = 5.750
Prob > |z| = 0.0000

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	377	5.599469	.0396205	.7692907	5.521564	5.677375
Female	158	5.170886	.0636148	.799626	5.045235	5.296537
combined	535	5.472897	.0346677	.801867	5.404795	5.540999
diff		.4285834	.0749442		.2810681	.5760987

diff = mean(Male) - mean(Female) t = 5.7187
Ho: diff = 0 Satterthwaite's degrees of freedom = 284.547

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.2455	0.000	
Combined K-S:	0.2455	0.000	0.000

(f) Kolmogorov-Smirnov test

Figure C.4: Results of all statistical tests done on the variable 'next year return expectations AEX', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	302	0.98181	3.899	3.195	0.00070

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	121	0.97997	1.941	1.487	0.06854

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.3046358	.92577257	302
Female	3.9669421	.99107588	121
Total	4.2080378	.95601447	423

W0 = 1.60556292 df(1, 421) Pr > F = 0.20581712

W50 = 0.23977194 df(1, 421) Pr > F = 0.62462593

W10 = 0.44074685 df(1, 421) Pr > F = 0.50712561

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	302	67235	64024
Female	121	22441	25652
combined	423	89676	89676

unadjusted variance 1291150.67
adjustment for ties -157144.66

adjusted variance 1134006.00

Ho: dt10a007(geslacht==Male) = dt10a007(geslacht==Female)
z = 3.015
Prob > |z| = 0.0026

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	302	4.304636	.0532722	.9257726	4.199803	4.409469
Female	121	3.966942	.0900978	.9910759	3.788555	4.14533
combined	423	4.208038	.046483	.9560145	4.116671	4.299405
diff		.3376936	.1016565		.1378761	.5375112

diff = mean(Male) - mean(Female) t = 3.3219
Ho: diff = 0 degrees of freedom = 421

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9995 Pr(|T| > |t|) = 0.0010 Pr(T > t) = 0.0005

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.1329	0.047	
Combined K-S:	0.1329	0.095	0.086

(f) Kolmogorov-Smirnov test

Figure C.5: Results of all statistical tests done on the variable 'next month return expectations S&P 500', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	300	0.99195	1.715	1.266	0.10282

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	119	0.93457	6.252	4.105	0.00002

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.3866667	.86001219	300
Female	5	.84372057	119
Total	5.2768496	.87206163	419

W0 = 14.929389 df(1, 417) Pr > F = 0.00012938

W50 = 4.253474 df(1, 417) Pr > F = 0.03978898

W10 = 12.786730 df(1, 417) Pr > F = 0.00038999

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	300	67149.5	63000
Female	119	20840.5	24990
combined	419	87990	87990

unadjusted variance 1249500.00
adjustment for ties -226058.79

adjusted variance 1023441.21

Ho: dt10a008(geslacht==Male) = dt10a008(geslacht==Female)
z = 4.102
Prob > |z| = 0.0000

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	300	5.386667	.0496528	.8600122	5.288953	5.48438
Female	119	5	.0773437	.8437206	4.846838	5.153162
combined	419	5.27685	.042603	.8720616	5.193107	5.360592
diff		.3866667	.09191		.2055322	.5678011

diff = mean(Male) - mean(Female) t = 4.2070
Ho: diff = 0 Satterthwaite's degrees of freedom = 220.524

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.2034	0.001	
Combined K-S:	0.2034	0.002	0.001

(f) Kolmogorov-Smirnov test

Figure C.6: Results of all statistical tests done on the variable 'next year return expectations S&P 500', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	370	0.99730	0.693	-0.870	0.80771

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	159	0.99338	0.810	-0.479	0.68396

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.1	.79514107	370
Female	2.9937107	.81517922	159
Total	3.0680529	.80192724	529

W0 = 0.49510400 df(1, 527) Pr > F = 0.48197008

W50 = 0.00070032 df(1, 527) Pr > F = 0.97889766

W10 = 0.14877057 df(1, 527) Pr > F = 0.69986867

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	370	3.1	.0413374	.7951411	3.018714	3.181286
Female	159	2.993711	.0646479	.8151792	2.866025	3.121396
combined	529	3.068053	.0348664	.8019272	2.999559	3.136547
diff		.1062893	.0759749		-.0429615	.2555401

diff = mean(Male) - mean(Female) t = 1.3990

Ho: diff = 0 degrees of freedom = 527

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.9188 Pr(|T| > |t|) = 0.1624 Pr(T > t) = 0.0812

(d) T-test

Figure C.7: Results of all statistical tests done on the variable 'next month risk expectations AEX', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	372	0.98856	2.952	2.567	0.00513

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	164	0.99449	0.692	-0.837	0.79878

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.2983871	.83372161	372
Female	3.097561	.79275486	164
Total	3.2369403	.82587657	536

W0 = 5.2704293 df(1, 534) Pr > F = 0.02207726

W50 = 4.5193681 df(1, 534) Pr > F = 0.03397141

W10 = 4.4538073 df(1, 534) Pr > F = 0.03528793

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	372	104328	99882
Female	164	39588	44034
combined	536	143916	143916

unadjusted variance 2730108.00
adjustment for ties -361910.13

adjusted variance 2368197.87

Ho: dt10a010(geslacht==Male) = dt10a010(geslacht==Female)
z = 2.889
Prob > |z| = 0.0039

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	372	3.298387	.0432265	.8337216	3.213388	3.383387
Female	164	3.097561	.0619038	.7927549	2.975324	3.219798
combined	536	3.23694	.0356724	.8258766	3.166865	3.307016
diff		.2008261	.0755023		.0522939	.3493584

diff = mean(Male) - mean(Female) t = 2.6599
Ho: diff = 0 Satterthwaite's degrees of freedom = 326.596

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9959 Pr(|T| > |t|) = 0.0082 Pr(T > t) = 0.0041

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0025	0.999	
Female:	-0.1426	0.010	
Combined K-S:	0.1426	0.020	0.017

(f) Kolmogorov-Smirnov test

Figure C.8: Results of all statistical tests done on the variable 'next year risk expectations AEX', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	313	0.99677	0.714	-0.793	0.78603

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	129	0.99076	0.946	-0.126	0.55000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.9648562	.79786056	313
Female	2.9069767	.88778042	129
Total	2.9479638	.82451548	442

W0 = 3.5846417 df(1, 440) Pr > F = 0.05897184

W50 = 2.2944327 df(1, 440) Pr > F = 0.13055665

W10 = 2.4226197 df(1, 440) Pr > F = 0.12031374

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	313	2.964856	.0450977	.7978606	2.876122	3.05359
Female	129	2.906977	.0781647	.8877804	2.752315	3.061639
combined	442	2.947964	.0392182	.8245155	2.870886	3.025042
diff		.0578795	.0863205		-.1117723	.2275313

diff = mean(Male) - mean(Female) t = 0.6705

Ho: diff = 0 degrees of freedom = 440

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.7486 Pr(|T| > |t|) = 0.5029 Pr(T > t) = 0.2514

(d) T-test

Figure C.9: Results of all statistical tests done on the variable 'next month risk expectations S&P 500', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	309	0.99620	0.832	-0.433	0.66761

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	129	0.97952	2.095	1.663	0.04812

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.0711974	.8724381	309
Female	2.9069767	.87893633	129
Total	3.0228311	.87655934	438

W0 = 0.43620017 df(1, 436) Pr > F = 0.50931098

W50 = 0.26925052 df(1, 436) Pr > F = 0.60409824

W10 = 0.00102252 df(1, 436) Pr > F = 0.97450516

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	309	69823	67825.5
Female	129	26318	28315.5
combined	438	96141	96141

unadjusted variance 1458248.25
adjustment for ties -160212.35

adjusted variance 1298035.90

Ho: dt10a012(geslacht==Male) = dt10a012(geslacht==Female)
z = 1.753
Prob > |z| = 0.0796

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	309	3.071197	.0496313	.8724381	2.973538	3.168857
Female	129	2.906977	.077386	.8789363	2.753855	3.060098
combined	438	3.022831	.0418836	.8765593	2.940513	3.105149
diff		.1642207	.0916534		-.0159168	.3443581

diff = mean(Male) - mean(Female) t = 1.7918
Ho: diff = 0 degrees of freedom = 436

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9631 Pr(|T| > |t|) = 0.0739 Pr(T > t) = 0.0369

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.0906	0.224	
Combined K-S:	0.0906	0.444	0.413

(f) Kolmogorov-Smirnov test

Figure C.10: Results of all statistical tests done on the variable 'next year risk expectations S&P 500', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	132	0.97680	2.420	1.990	0.02328

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	27	0.92887	2.091	1.515	0.06484

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4393939	1.5145986	132
Female	2.2592593	1.5589097	27
Total	2.408805	1.518718	159

W0 = 0.01426156 df(1, 157) Pr > F = 0.90509389

W50 = 0.00363998 df(1, 157) Pr > F = 0.95196773

W10 = 0.01426156 df(1, 157) Pr > F = 0.90509389

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	132	10703	10560
Female	27	2017	2160
combined	159	12720	12720

unadjusted variance 47520.00
adjustment for ties -4708.59

adjusted variance 42811.41

Ho: dt10a016(geslacht==Male) = dt10a016(geslacht==Female)
z = 0.691
Prob > |z| = 0.4895

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	132	2.439394	.1318289	1.514599	2.178605	2.700183
Female	27	2.259259	.3000123	1.55891	1.642575	2.875943
combined	159	2.408805	.1204422	1.518718	2.170921	2.646689
diff		.1801347	.3214784		-.4548459	.8151152

diff = mean(Male) - mean(Female) t = 0.5603
Ho: diff = 0 degrees of freedom = 157

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7120 Pr(|T| > |t|) = 0.5761 Pr(T > t) = 0.2880

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0034	0.999	
Female:	-0.1019	0.628	
Combined K-S:	0.1019	0.974	0.953

(f) Kolmogorov-Smirnov test

Figure C.11: Results of all statistical tests done on the variable 'Favorite sports team's performance', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	449	0.99657	1.049	0.114	0.45457

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	259	0.99579	0.788	-0.554	0.71028

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.7728285	.81944628	449
Female	2.7181467	.90310556	259
Total	2.7528249	.85077912	708

W0 = 4.1308878 df(1, 706) Pr > F = 0.04248104

W50 = 3.1669369 df(1, 706) Pr > F = 0.07557334

W10 = 3.6995427 df(1, 706) Pr > F = 0.05482922

(c) Levene's test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	449	2.772829	.0386721	.8194463	2.696827	2.84883
Female	259	2.718147	.0561162	.9031056	2.607643	2.828651
combined	708	2.752825	.0319742	.8507791	2.690049	2.815601
diff		.0546818	.068151		-.079218	.1885816

diff = mean(Male) - mean(Female) t = 0.8024

Ho: diff = 0 Satterthwaite's degrees of freedom = 496.728

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.7886 Pr(|T| > |t|) = 0.4227 Pr(T > t) = 0.2114

(d) T-test

Figure C.12: Results of all statistical tests done on the variable 'Current weather perception', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	449	0.98547	4.436	3.563	0.00018

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	259	0.96357	6.815	4.473	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.4164811	1.2074157	449
Female	5.3436293	1.3416653	259
Total	5.3898305	1.257738	708

W0 = 5.9242378 df(1, 706) Pr > F = 0.01518094

W50 = 2.5107349 df(1, 706) Pr > F = 0.11352099

W10 = 6.3500274 df(1, 706) Pr > F = 0.01195744

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	449	160499	159170.5
Female	259	90487	91815.5
combined	708	250986	250986

unadjusted variance 6870859.92
adjustment for ties -448055.22

adjusted variance 6422804.70

Ho: dt10a018(geslacht==Male) = dt10a018(geslacht==Female)
z = 0.524
Prob > |z| = 0.6001

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	449	5.416481	.0569815	1.207416	5.304497	5.528465
Female	259	5.343629	.083367	1.341665	5.179463	5.507796
combined	708	5.389831	.0472687	1.257738	5.297027	5.482634
diff		.0728517	.1009799		-.1255521	.2712555

ht == 1 ff = mean(Male) - mean(Female) t = 0.7214
Ho: diff = 0 Satterthwaite's degrees of freedom = 493.36

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7645 Pr(|T| > |t|) = 0.4710 Pr(T > t) = 0.2355

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0330	0.699	
Female:	-0.0517	0.415	
Combined K-S:	0.0517	0.772	0.746

(f) Kolmogorov-Smirnov test

Figure C.13: Results of all statistical tests done on the variable 'spring-autumn preference', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	449	0.95889	12.554	6.052	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	259	0.95360	8.682	5.037	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	1.4944321	.69474443	449
Female	1.5752896	.70787884	259
Total	1.5240113	.70016346	708

W0 = 0.43956559 df(1, 706) Pr > F = 0.5075486

W50 = 2.19425763 df(1, 706) Pr > F = 0.13897209

W10 = 1.30000909 df(1, 706) Pr > F = 0.25459821

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	449	155203.5	159170.5
Female	259	95782.5	91815.5
combined	708	250986	250986

unadjusted variance 6870859.92
adjustment for ties -1.59e+06

adjusted variance 5276582.16

Ho: dt10a019(geslacht==Male) = dt10a019(geslacht==Female)
z = -1.727
Prob > |z| = 0.0842

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	449	1.494432	.032787	.6947444	1.429997	1.558868
Female	259	1.57529	.0439855	.7078788	1.488673	1.661906
combined	708	1.524011	.0263138	.7001635	1.472349	1.575674
diff		-.0808575	.0545854		-.1880267	.0263116

diff = mean(Male) - mean(Female) t = -1.4813
Ho: diff = 0 degrees of freedom = 706

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0695 Pr(|T| > |t|) = 0.1390 Pr(T > t) = 0.9305

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0685	0.214	
Female:	-0.0007	1.000	
Combined K-S:	0.0685	0.424	0.401

(f) Kolmogorov-Smirnov test

Figure C.14: Results of all statistical tests done on the variable 'suffering from winter blues', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	449	0.99695	0.933	-0.167	0.56619

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	259	0.98889	2.079	1.706	0.04399

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.5100223	.65158615	449
Female	2.4749035	.67796684	259
Total	2.4971751	.66109757	708

W0 = 0.22788435 df(1, 706) Pr > F = 0.63324476

W50 = 0.38945009 df(1, 706) Pr > F = 0.53279019

W10 = 0.10283626 df(1, 706) Pr > F = 0.7485471

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	449	161321	159170.5
Female	259	89665	91815.5
combined	708	250986	250986

unadjusted variance 6870859.92
adjustment for ties -1.31e+06

adjusted variance 5560321.59

Ho: dt10a020(geslacht==Male) = dt10a020(geslacht==Female)
z = 0.912
Prob > |z| = 0.3618

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	449	2.510022	.0307503	.6515861	2.44959	2.570455
Female	259	2.474903	.0421268	.6779668	2.391947	2.55786
combined	708	2.497175	.0248456	.6610976	2.448395	2.545955
diff		.0351188	.0516029		-.0661947	.1364323

diff = mean(Male) - mean(Female) t = 0.6806
Ho: diff = 0 degrees of freedom = 706

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7518 Pr(|T| > |t|) = 0.4964 Pr(T > t) = 0.2482

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0067	0.985	
Female:	-0.0427	0.549	
Combined K-S:	0.0427	0.926	0.909

(f) Kolmogorov-Smirnov test

Figure C.15: Results of all statistical tests done on the variable 'currently feeling (mood)', for the questionnaire filled in in February.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	449	0.99438	1.716	1.292	0.09822

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	259	0.99281	1.345	0.690	0.24505

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.674833	.69841276	449
Female	2.6138996	.68593274	259
Total	2.6525424	.69400894	708

W0 = 0.00509527 df(1, 706) Pr > F = 0.9431146

W50 = 0.02636130 df(1, 706) Pr > F = 0.87106753

W10 = 0.29170050 df(1, 706) Pr > F = 0.58930319

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	449	2.674833	.0329601	.6984128	2.610057	2.739609
Female	259	2.6139	.0426218	.6859327	2.529969	2.69783
combined	708	2.652542	.0260825	.6940089	2.601334	2.703751
diff		.0609333	.0541411		-.0453634	.1672301

diff = mean(Male) - mean(Female) t = 1.1255

Ho: diff = 0 degrees of freedom = 706

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.8696 Pr(|T| > |t|) = 0.2608 Pr(T > t) = 0.1304

(d) T-test

Figure C.16: Results of all statistical tests done on the variable 'general feeling: optimistic-pessimistic', for the questionnaire filled in in February.

Appendix D

Descriptive analysis tests - June

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	92	0.95983	3.094	2.494	0.00631

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	19	0.92519	1.708	1.075	0.14115

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.3043478	1.3886441	92
Female	2.3684211	1.5709348	19
Total	2.3153153	1.4140977	111

W0 = 1.24237788 df(1, 109) Pr > F = 0.26746488

W50 = 0.86589809 df(1, 109) Pr > F = 0.35414976

W10 = 1.24237788 df(1, 109) Pr > F = 0.26746488

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	92	5157	5152
Female	19	1059	1064
combined	111	6216	6216

unadjusted variance 16314.67
adjustment for ties -1491.38

adjusted variance 14823.28

Ho: dt10a003(geslacht==Male) = dt10a003(geslacht==Female)
z = 0.041
Prob > |z| = 0.9672

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	92	2.304348	.1447762	1.388644	2.016768	2.591928
Female	19	2.368421	.3603972	1.570935	1.611255	3.125587
combined	111	2.315315	.1342202	1.414098	2.049322	2.581308
diff		-.0640732	.3579229		-.7734647	.6453183

diff = mean(Male) - mean(Female) t = -0.1790
Ho: diff = 0 degrees of freedom = 109

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4291 Pr(|T| > |t|) = 0.8583 Pr(T > t) = 0.5709

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1001	0.729	
Female:	-0.0715	0.851	
Combined K-S:	0.1001	0.997	0.991

(f) Kolmogorov-Smirnov test

Figure D.1: Results of all statistical tests done on the variable 'past trading', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	67	0.96510	2.073	1.582	0.05686

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	14	0.98920	0.200	-3.170	0.99924

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4477612	1.4800039	67
Female	2.8571429	1.7032613	14
Total	2.5185185	1.5174906	81

W0 = 0.44854021 df(1, 79) Pr > F = 0.50498185

W50 = 0.45022486 df(1, 79) Pr > F = 0.50418532

W10 = 0.44854021 df(1, 79) Pr > F = 0.50498185

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	67	2.447761	.1808113	1.480004	2.08676	2.808763
Female	14	2.857143	.4552157	1.703261	1.873709	3.840577
combined	81	2.518519	.1686101	1.517491	2.182974	2.854063
diff		-.4093817	.4463739		-1.297867	.4791033

diff = mean(Male) - mean(Female) t = -0.9171

Ho: diff = 0 degrees of freedom = 79

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.1809 Pr(|T| > |t|) = 0.3619 Pr(T > t) = 0.8191

(d) T-test

Figure D.2: Results of all statistical tests done on the variable 'future trading', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	323	0.98158	4.190	3.375	0.00037

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	128	0.98436	1.590	1.042	0.14870

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.3962848	1.0881569	323
Female	3.4765625	1.0421423	128
Total	3.4190687	1.0747568	451

W0 = 0.88389426 df(1, 449) Pr > F = 0.34764279

W50 = 0.94776538 df(1, 449) Pr > F = 0.33081293

W10 = 0.90229402 df(1, 449) Pr > F = 0.34267835

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	323	72319	72998
Female	128	29607	28928
combined	451	101926	101926

unadjusted variance 1557290.67
adjustment for ties -157400.04

adjusted variance 1399890.63

Ho: dt10a005(geslacht==Male) = dt10a005(geslacht==Female)
z = -0.574
Prob > |z| = 0.5660

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	323	3.396285	.0605467	1.088157	3.277168	3.515402
Female	128	3.476563	.0921132	1.042142	3.294287	3.658838
combined	451	3.419069	.0506083	1.074757	3.319611	3.518527
diff		-.0802777	.1123126		-.3010012	.1404459

diff = mean(Male) - mean(Female) t = -0.7148
Ho: diff = 0 degrees of freedom = 449

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2376 Pr(|T| > |t|) = 0.4751 Pr(T > t) = 0.7624

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0420	0.723	
Female:	-0.0192	0.935	
Combined K-S:	0.0420	0.997	0.994

(f) Kolmogorov-Smirnov test

Figure D.3: Results of all statistical tests done on the variable 'next month return expectations AEX', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	327	0.97573	5.583	4.053	0.00003

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	129	0.93654	6.492	4.207	0.00001

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.9051988	.86878584	327
Female	4.751938	.8199753	129
Total	4.8618421	.85715611	456

W0 = 0.03835698 df(1, 454) Pr > F = 0.84481569

W50 = 0.54320063 df(1, 454) Pr > F = 0.46149

W10 = 0.51574973 df(1, 454) Pr > F = 0.47302978

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	327	76791	74719.5
Female	129	27405	29476.5
combined	456	104196	104196

unadjusted variance 1606469.25
adjustment for ties -380691.82

adjusted variance 1225777.43

Ho: dt10a006(geslacht==Male) = dt10a006(geslacht==Female)
z = 1.871
Prob > |z| = 0.0613

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	327	4.905199	.048044	.8687858	4.810683	4.999714
Female	129	4.751938	.0721948	.8199753	4.609088	4.894788
combined	456	4.861842	.04014	.8571561	4.782959	4.940725
diff		.1532608	.0889274		-.0214995	.3280211

diff = mean(Male) - mean(Female) t = 1.7234
Ho: diff = 0 degrees of freedom = 454

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9573 Pr(|T| > |t|) = 0.0855 Pr(T > t) = 0.0427

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0000	1.000	
Female:	-0.0905	0.220	
Combined K-S:	0.0905	0.435	0.406

(f) Kolmogorov-Smirnov test

Figure D.4: Results of all statistical tests done on the variable 'next year return expectations AEX', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	273	0.99244	1.481	0.918	0.17921

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	105	0.99604	0.341	-2.396	0.99171

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	3.7582418	1.0074063	273
Female	3.5142857	1.0841009	105
Total	3.6904762	1.033633	378

W0 = 3.1220346 df(1, 376) Pr > F = 0.07805149

W50 = 4.8747118 df(1, 376) Pr > F = 0.02785607

W10 = 2.8523523 df(1, 376) Pr > F = 0.0920694

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	273	3.758242	.060971	1.007406	3.638207	3.878277
Female	105	3.514286	.1057974	1.084101	3.304485	3.724086
combined	378	3.690476	.0531643	1.033633	3.58594	3.795012
diff		.243956	.118186		.0115676	.4763445

diff = mean(Male) - mean(Female) t = 2.0642

Ho: diff = 0 degrees of freedom = 376

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.9802 Pr(|T| > |t|) = 0.0397 Pr(T > t) = 0.0198

(d) T-test

Figure D.5: Results of all statistical tests done on the variable 'next month return expectations S&P 500', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	269	0.98476	2.949	2.525	0.00579

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	101	0.97646	1.959	1.493	0.06772

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.9107807	.91801769	269
Female	4.6534653	.80542714	101
Total	4.8405405	.89502069	370

W0 = 0.41958317 df(1, 368) Pr > F = 0.51754901

W50 = 0.00007069 df(1, 368) Pr > F = 0.99329614

W10 = 0.22314852 df(1, 368) Pr > F = 0.63693132

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	269	52094	49899.5
Female	101	16541	18735.5
combined	370	68635	68635

unadjusted variance 839974.92
adjustment for ties -144974.17

adjusted variance 695000.75

Ho: dt10a008(geslacht==Male) = dt10a008(geslacht==Female)
z = 2.632
Prob > |z| = 0.0085

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	269	4.910781	.0559725	.9180177	4.800579	5.020982
Female	101	4.653465	.080143	.8054271	4.494464	4.812467
combined	370	4.840541	.0465299	.8950207	4.749043	4.932038
diff		.2573153	.1037254		.0533465	.4612842

diff = mean(Male) - mean(Female) t = 2.4807
Ho: diff = 0 degrees of freedom = 368

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9932 Pr(|T| > |t|) = 0.0136 Pr(T > t) = 0.0068

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0050	0.996	
Female:	-0.1135	0.151	
Combined K-S:	0.1135	0.300	0.273

(f) Kolmogorov-Smirnov test

Figure D.6: Results of all statistical tests done on the variable 'next year return expectations S&P 500', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	322	0.99548	1.026	0.060	0.47622

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	127	0.99341	0.665	-0.916	0.82014

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4285714	.75061168	322
Female	2.6220472	.61630149	127
Total	2.4832962	.71981632	449

W0 = 10.0204175 df(1, 447) Pr > F = 0.00165396

W50 = 10.0475875 df(1, 447) Pr > F = 0.00163028

W10 = 9.0251829 df(1, 447) Pr > F = 0.00281246

(c) Levene's test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	322	2.428571	.04183	.7506117	2.346276	2.510867
Female	127	2.622047	.0546879	.6163015	2.513821	2.730273
combined	449	2.483296	.0339702	.7198163	2.416535	2.550057
diff		-.1934758	.0688514		-.3290098	-.0579418

diff = mean(Male) - mean(Female) t = -2.8100

Ho: diff = 0 Satterthwaite's degrees of freedom = 279.066

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.0027 Pr(|T| > |t|) = 0.0053 Pr(T > t) = 0.9973

(d) T-test

Figure D.7: Results of all statistical tests done on the variable 'next month risk expectations AEX', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	327	0.99925	0.174	-4.127	0.99998

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	130	0.99019	1.011	0.024	0.49057

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.5412844	.84576292	327
Female	2.6923077	.78598335	130
Total	2.5842451	.83114612	457

W0 = 3.1721336 df(1, 455) Pr > F = 0.07557156

W50 = 3.1780266 df(1, 455) Pr > F = 0.07530144

W10 = 4.4727822 df(1, 455) Pr > F = 0.03498194

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	327	2.541284	.0467708	.8457629	2.449274	2.633295
Female	130	2.692308	.0689353	.7859834	2.555918	2.828698
combined	457	2.584245	.0388794	.8311461	2.50784	2.66065
diff		-.1510233	.0859803		-.3199911	.0179446

diff = mean(Male) - mean(Female) t = -1.7565

Ho: diff = 0 degrees of freedom = 455

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.0398 Pr(|T| > |t|) = 0.0797 Pr(T > t) = 0.9602

(d) T-test

Figure D.8: Results of all statistical tests done on the variable 'next year risk expectations AEX', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	275	0.98952	2.066	1.697	0.04489

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	107	0.99168	0.727	-0.710	0.76128

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4763636	.77033589	275
Female	2.6542056	.71510395	107
Total	2.526178	.75856997	382

W0 = 2.7763513 df(1, 380) Pr > F = 0.09648992

W50 = 3.6374866 df(1, 380) Pr > F = 0.05724589

W10 = 2.2940475 df(1, 380) Pr > F = 0.13070217

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	275	50884.5	52662.5
Female	107	22268.5	20490.5
combined	382	73153	73153

unadjusted variance	939147.92
adjustment for ties	-150613.64
adjusted variance	788534.28

Ho: dt10a011(geslacht==Male) = dt10a011(geslacht==Female)

z = -2.002

Prob > |z| = 0.0453

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	275	2.476364	.046453	.7703359	2.384913	2.567814
Female	107	2.654206	.0691317	.7151039	2.517145	2.791266
combined	382	2.526178	.0388118	.75857	2.449866	2.60249
diff		-.177842	.0860624		-.3470601	-.0086239

diff = mean(Male) - mean(Female) t = -2.0664

Ho: diff = 0 degrees of freedom = 380

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.0197 Pr(|T| > |t|) = 0.0395 Pr(T > t) = 0.9803

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1041	0.188	
Female:	0.0000	1.000	
Combined K-S:	0.1041	0.374	0.345

(f) Kolmogorov-Smirnov test

Figure D.9: Results of all statistical tests done on the variable 'next month risk expectations S&P 500', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	267	0.99060	1.807	1.382	0.08355

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	102	0.99668	0.279	-2.834	0.99770

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.5543071	.85831306	267
Female	2.6862745	.83227461	102
Total	2.5907859	.85212119	369

W0 = 0.38823290 df(1, 367) Pr > F = 0.53361673

W50 = 0.72183334 df(1, 367) Pr > F = 0.39609708

W10 = 1.45663893 df(1, 367) Pr > F = 0.22824299

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	267	2.554307	.0525279	.8583131	2.450884	2.65773
Female	102	2.686275	.0824075	.8322746	2.5228	2.849749
combined	369	2.590786	.0443597	.8521212	2.503556	2.678016
diff		-.1319674	.0990838		-.3268106	.0628758

diff = mean(Male) - mean(Female) t = -1.3319

Ho: diff = 0 degrees of freedom = 367

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.0919 Pr(|T| > |t|) = 0.1837 Pr(T > t) = 0.9081

(d) T-test

Figure D.10: Results of all statistical tests done on the variable 'next year risk expectations S&P 500', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	23	0.91167	2.310	1.703	0.04430

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	9	0.91114	1.306	0.457	0.32396

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.2173913	1.4446302	23
Female	2.1111111	1.0540926	9
Total	2.1875	1.3304741	32

W0 = 2.2057848 df(1, 30) Pr > F = 0.14792713

W50 = 1.6146901 df(1, 30) Pr > F = 0.21359968

W10 = 2.2057848 df(1, 30) Pr > F = 0.14792713

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	23	376.5	379.5
Female	9	151.5	148.5
combined	32	528	528

unadjusted variance 569.25
adjustment for ties -57.49

adjusted variance 511.76

Ho: dt10a016(geslacht==Male) = dt10a016(geslacht==Female)
z = -0.133
Prob > |z| = 0.8945

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	23	2.217391	.3012262	1.44463	1.592686	2.842096
Female	9	2.111111	.3513642	1.054093	1.300864	2.921358
combined	32	2.1875	.2351968	1.330474	1.707813	2.667187
diff		.1062802	.5314068		-.9789973	1.191558

diff = mean(Male) - mean(Female) t = 0.2000
Ho: diff = 0 degrees of freedom = 30

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5786 Pr(|T| > |t|) = 0.8428 Pr(T > t) = 0.4214

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1449	0.762	
Female:	-0.1304	0.802	
Combined K-S:	0.1449	0.999	0.991

(f) Kolmogorov-Smirnov test

Figure D.11: Results of all statistical tests done on the variable 'Favorite sports team's performance', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	399	0.99223	2.134	1.803	0.03567

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	213	0.99535	0.733	-0.716	0.76309

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.6115288	.87796442	399
Female	2.7887324	.8727882	213
Total	2.6732026	.87951828	612

W0 = 1.3726442 df(1, 610) Pr > F = 0.2418155

W50 = 2.0154257 df(1, 610) Pr > F = 0.15621841

W10 = 1.7490880 df(1, 610) Pr > F = 0.18648705

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	399	117601.5	122293.5
Female	213	69976.5	65284.5
combined	612	187578	187578

unadjusted variance 4341419.25
adjustment for ties -483134.29

adjusted variance 3858284.96

Ho: dt10a017(geslacht==Male) = dt10a017(geslacht==Female)
z = -2.389
Prob > |z| = 0.0169

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	399	2.611529	.0439532	.8779644	2.525119	2.697938
Female	213	2.788732	.0598025	.8727882	2.670849	2.906616
combined	612	2.673203	.0355524	.8795183	2.603383	2.743022
diff		-.1772036	.0743511		-.3232187	-.0311884

diff = mean(Male) - mean(Female) t = -2.3833
Ho: diff = 0 degrees of freedom = 610

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0087 Pr(|T| > |t|) = 0.0175 Pr(T > t) = 0.9913

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0975	0.071	
Female:	0.0000	1.000	
Combined K-S:	0.0975	0.143	0.132

(f) Kolmogorov-Smirnov test

Figure D.12: Results of all statistical tests done on the variable 'Current weather perception', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	399	0.97809	6.017	4.270	0.00001

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	213	0.96787	5.064	3.744	0.00009

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.0952381	1.2783282	399
Female	5.2065728	1.4454072	213
Total	5.1339869	1.3387178	612

W0 = 8.3515292 df(1, 610) Pr > F = 0.0039906

W50 = 7.0265826 df(1, 610) Pr > F = 0.00823933

W10 = 8.3020776 df(1, 610) Pr > F = 0.0040992

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	399	120009.5	122293.5
Female	213	67568.5	65284.5
combined	612	187578	187578

unadjusted variance 4341419.25
adjustment for ties -359598.45

adjusted variance 3981820.80

Ho: dt10a018(geslacht==Male) = dt10a018(geslacht==Female)
z = -1.145
Prob > |z| = 0.2524

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	399	5.095238	.0639965	1.278328	4.969425	5.221051
Female	213	5.206573	.0990377	1.445407	5.011348	5.401798
combined	612	5.133987	.0541145	1.338718	5.027714	5.24026
diff		-.1113347	.1179152		-.3431641	.1204948

diff = mean(Male) - mean(Female) t = -0.9442
Ho: diff = 0 Satterthwaite's degrees of freedom = 389.803

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1728 Pr(|T| > |t|) = 0.3457 Pr(T > t) = 0.8272

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0865	0.125	
Female:	-0.0185	0.910	
Combined K-S:	0.0865	0.250	0.232

(f) Kolmogorov-Smirnov test

Figure D.13: Results of all statistical tests done on the variable 'spring-autumn preference', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	399	0.95136	13.360	6.167	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	213	0.94773	8.238	4.867	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	1.4611529	.71091255	399
Female	1.5868545	.73857075	213
Total	1.504902	.72254471	612

W0 = 1.3201040 df(1, 610) Pr > F = 0.25102369

W50 = 4.2251239 df(1, 610) Pr > F = 0.04025485

W10 = 4.5939471 df(1, 610) Pr > F = 0.03247988

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	399	117923.5	122293.5
Female	213	69654.5	65284.5
combined	612	187578	187578

unadjusted variance 4341419.25
adjustment for ties -1.10e+06

adjusted variance 3242704.68

Ho: dt10a019(geslacht==Male) = dt10a019(geslacht==Female)
z = -2.427
Prob > |z| = 0.0152

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	399	1.461153	.0355901	.7109126	1.391185	1.531121
Female	213	1.586854	.050606	.7385708	1.487099	1.68661
combined	612	1.504902	.0292071	.7225447	1.447543	1.562261
diff		-.1257016	.0611535		-.2457984	-.0056047

diff = mean(Male) - mean(Female) t = -2.0555
Ho: diff = 0 degrees of freedom = 610

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0201 Pr(|T| > |t|) = 0.0403 Pr(T > t) = 0.9799

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1067	0.042	
Female:	0.0000	1.000	
Combined K-S:	0.1067	0.085	0.077

(f) Kolmogorov-Smirnov test

Figure D.14: Results of all statistical tests done on the variable 'suffering from winter blues', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	399	0.98706	3.554	3.017	0.00128

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	213	0.98996	1.582	1.059	0.14480

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4360902	.64993293	399
Female	2.4929577	.66318072	213
Total	2.4558824	.65459327	612

W0 = 0.35396887 df(1, 610) Pr > F = 0.55209563

W50 = 1.26532722 df(1, 610) Pr > F = 0.26108754

W10 = 0.40333652 df(1, 610) Pr > F = 0.52560929

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	399	120198.5	122293.5
Female	213	67379.5	65284.5
combined	612	187578	187578

unadjusted variance 4341419.25
adjustment for ties -883500.29

adjusted variance 3457918.96

Ho: dt10a020(geslacht==Male) = dt10a020(geslacht==Female)
z = -1.127
Prob > |z| = 0.2599

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	399	2.43609	.0325373	.6499329	2.372124	2.500057
Female	213	2.492958	.0454404	.6631807	2.403385	2.582531
combined	612	2.455882	.0264604	.6545933	2.403918	2.507847
diff		-.0568675	.0555461		-.1659524	.0522174

diff = mean(Male) - mean(Female) t = -1.0238
Ho: diff = 0 degrees of freedom = 610

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1532 Pr(|T| > |t|) = 0.3063 Pr(T > t) = 0.8468

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0503	0.495	
Female:	-0.0003	1.000	
Combined K-S:	0.0503	0.874	0.851

(f) Kolmogorov-Smirnov test

Figure D.15: Results of all statistical tests done on the variable 'currently feeling (mood)', for the questionnaire filled in in June.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	399	0.99473	1.447	0.879	0.18971

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	213	0.99315	1.080	0.178	0.42944

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.6766917	.73206055	399
Female	2.6338028	.6638816	213
Total	2.6617647	.70882362	612

W0 = 1.21345108 df(1, 610) Pr > F = 0.27108418

W50 = 0.73362723 df(1, 610) Pr > F = 0.39204633

W10 = 2.21238631 df(1, 610) Pr > F = 0.13742346

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	399	2.676692	.0366489	.7320605	2.604642	2.748741
Female	213	2.633803	.0454884	.6638816	2.544135	2.72347
combined	612	2.661765	.0286525	.7088236	2.605495	2.718034
diff		.0428889	.0601745		-.0752854	.1610633

diff = mean(Male) - mean(Female) t = 0.7127

Ho: diff = 0 degrees of freedom = 610

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.7619 Pr(|T| > |t|) = 0.4763 Pr(T > t) = 0.2381

(d) T-test

Figure D.16: Results of all statistical tests done on the variable 'general feeling: optimistic-pessimistic', for the questionnaire filled in in June.

Appendix E

Descriptive analysis tests - total dataset

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	318	0.97418	5.793	4.135	0.00002

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a003	98	0.96808	2.591	2.110	0.01744

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4748428	1.5147006	318
Female	2.4183673	1.5920127	98
Total	2.4615385	1.5315042	416

W0 = 1.15763658 df(1, 414) Pr > F = 0.28258284

W50 = 0.70040149 df(1, 414) Pr > F = 0.40313164

W10 = 1.15763658 df(1, 414) Pr > F = 0.28258284

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	318	66935	66303
Female	98	19801	20433
combined	416	86736	86736

unadjusted variance 1082949.00
adjustment for ties -89477.09

adjusted variance 993471.91

Ho: dt10a003(geslacht==Male) = dt10a003(geslacht==Female)
z = 0.634
Prob > |z| = 0.5260

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	318	2.474843	.0849402	1.514701	2.307725	2.641961
Female	98	2.418367	.1608176	1.592013	2.099189	2.737546
combined	416	2.461538	.0750882	1.531504	2.313938	2.609139
diff		.0564754	.1771368		-.2917243	.4046751

diff = mean(Male) - mean(Female) t = 0.3188
Ho: diff = 0 degrees of freedom = 414

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6250 Pr(|T| > |t|) = 0.7500 Pr(T > t) = 0.3750

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.0137	0.972	
Female:	-0.0755	0.425	
Combined K-S:	0.0755	0.786	0.751

(f) Kolmogorov-Smirnov test

Figure E.1: Results of all statistical tests done on the variable 'past trading', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	235	0.97681	3.983	3.206	0.00067

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a004	60	0.97897	1.143	0.288	0.38672

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.387234	1.4318742	235
Female	2.7333333	1.676019	60
Total	2.4576271	1.4882994	295

W0 = 7.7269121 df(1, 293) Pr > F = 0.00579231

W50 = 5.9452168 df(1, 293) Pr > F = 0.0153514

W10 = 7.7269121 df(1, 293) Pr > F = 0.00579231

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	235	34077.5	34780
Female	60	9582.5	8880
combined	295	43660	43660

unadjusted variance	347800.00
adjustment for ties	-26162.47
adjusted variance	321637.53

Ho: dt10a004(geslacht==Male) = dt10a004(geslacht==Female)

z = -1.239

Prob > |z| = 0.2155

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	235	2.387234	.0934052	1.431874	2.203212	2.571257
Female	60	2.733333	.2163731	1.676019	2.300372	3.166295
combined	295	2.457627	.0866521	1.488299	2.28709	2.628164
diff		-.3460993	.2356732		-.8149012	.1227027

diff = mean(Male) - mean(Female) t = -1.4686

Ho: diff = 0 Satterthwaite's degrees of freedom = 82.3177

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.0729 Pr(|T| > |t|) = 0.1458 Pr(T > t) = 0.9271

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Exact
Male:	0.1305	0.196	
Female:	0.0000	1.000	
Combined K-S:	0.1305	0.390	0.352

(f) Kolmogorov-Smirnov test

Figure E.2: Results of all statistical tests done on the variable 'future trading', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	1105	0.98303	11.724	6.121	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a005	453	0.97536	7.583	4.848	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.0162896	1.0536801	1105
Female	3.9072848	1.0434223	453
Total	3.9845956	1.0515396	1558

W0 = 0.00064762 df(1, 1556) Pr > F = 0.97970061

W50 = 0.76836540 df(1, 1556) Pr > F = 0.38085851

W10 = 2.40649747 df(1, 1556) Pr > F = 0.12103581

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1105	876634.5	861347.5
Female	453	337826.5	353113.5
combined	1558	1214461	1214461

unadjusted variance 65031736
adjustment for ties -8635233.5

adjusted variance 56396503

Ho: dt10a005(geslacht==Male) = dt10a005(geslacht==Female)
z = 2.036
Prob > |z| = 0.0418

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1105	4.01629	.0316977	1.05368	3.954095	4.078484
Female	453	3.907285	.0490243	1.043422	3.810941	4.003629
combined	1558	3.984596	.0266405	1.05154	3.932341	4.036851
diff		.1090048	.0586188		-.0059753	.2239849

diff = mean(Male) - mean(Female) t = 1.8596
Ho: diff = 0 degrees of freedom = 1556

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9684 Pr(|T| > |t|) = 0.0631 Pr(T > t) = 0.0316

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.0605	0.095	
Combined K-S:	0.0605	0.190	0.171

(f) Kolmogorov-Smirnov test

Figure E.3: Results of all statistical tests done on the variable 'next month return expectations AEX', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	1128	0.97465	17.844	7.171	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a006	461	0.95681	13.505	6.234	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.3102837	.89234182	1128
Female	5.0455531	.78024994	461
Total	5.2334802	.86942859	1589

W0 = 52.043717 df(1, 1587) Pr > F = 0.00000000

W50 = 20.301177 df(1, 1587) Pr > F = 0.00000710

W10 = 32.684417 df(1, 1587) Pr > F = 0.00000001

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1128	941026.5	896760
Female	461	322228.5	366495
combined	1589	1263255	1263255

unadjusted variance 68901060
adjustment for ties -14655895

adjusted variance 54245165

Ho: dt10a006(geslacht==Male) = dt10a006(geslacht==Female)
z = 6.010
Prob > |z| = 0.0000

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1128	5.310284	.0265691	.8923418	5.258153	5.362414
Female	461	5.045553	.0363399	.7802499	4.97414	5.116966
combined	1589	5.23348	.0218108	.8694286	5.190699	5.276261
diff		.2647305	.0450167		.1763892	.3530719

diff = mean(Male) - mean(Female) t = 5.8807
Ho: diff = 0 Satterthwaite's degrees of freedom = 970.085

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.1624	0.000	
Combined K-S:	0.1624	0.000	0.000

(f) Kolmogorov-Smirnov test

Figure E.4: Results of all statistical tests done on the variable 'next year return expectations AEX', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	925	0.99211	4.635	3.786	0.00008

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a007	362	0.99364	1.601	1.115	0.13241

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	4.0454054	.99353591	925
Female	3.8121547	1.0489759	362
Total	3.979798	1.0144656	1287

W0 = 5.7560392 df(1, 1285) Pr > F = 0.0165738

W50 = 1.7411228 df(1, 1285) Pr > F = 0.18723167

W10 = 1.7732634 df(1, 1285) Pr > F = 0.18321488

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	925	616466	595700
Female	362	212362	233128
combined	1287	828828	828828

unadjusted variance 35940567
adjustment for ties -4253346.4

adjusted variance 31687220

Ho: dt10a007(geslacht==Male) = dt10a007(geslacht==Female)
z = 3.689
Prob > |z| = 0.0002

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	925	4.045405	.0326673	.9935359	3.981295	4.109516
Female	362	3.812155	.055133	1.048976	3.703733	3.920577
combined	1287	3.979798	.028278	1.014466	3.924322	4.035274
diff		.2332507	.0640843		.1074056	.3590958

diff = mean(Male) - mean(Female) t = 3.6398
Ho: diff = 0 Satterthwaite's degrees of freedom = 628.698

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9999 Pr(|T| > |t|) = 0.0003 Pr(T > t) = 0.0001

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.0969	0.008	
Combined K-S:	0.0969	0.015	0.012

(f) Kolmogorov-Smirnov test

Figure E.5: Results of all statistical tests done on the variable 'next month return expectations S&P 500', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	920	0.98302	9.926	5.664	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a008	356	0.97220	6.897	4.570	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.1695652	.94779271	920
Female	4.8932584	.8117861	356
Total	5.0924765	.91996921	1276

W0 = 11.5730458 df(1, 1274) Pr > F = 0.00068989

W50 = 8.1948648 df(1, 1274) Pr > F = 0.00426966

W10 = 13.1908863 df(1, 1274) Pr > F = 0.00029248

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	920	613758	587420
Female	356	200968	227306
combined	1276	814726	814726

unadjusted variance 34853587
adjustment for ties -6266410.5

adjusted variance 28587176

Ho: dt10a008(geslacht==Male) = dt10a008(geslacht==Female)
z = 4.926
Prob > |z| = 0.0000

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	920	5.169565	.0312478	.9477927	5.10824	5.230891
Female	356	4.893258	.0430246	.8117861	4.808643	4.977874
combined	1276	5.092476	.0257542	.9199692	5.041951	5.143002
diff		.2763068	.0531746		.1719175	.380696

diff = mean(Male) - mean(Female) t = 5.1962
Ho: diff = 0 Satterthwaite's degrees of freedom = 747.9

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.1364	0.000	
Combined K-S:	0.1364	0.000	0.000

(f) Kolmogorov-Smirnov test

Figure E.6: Results of all statistical tests done on the variable 'next year return expectations S&P 500', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	1094	0.99824	1.206	0.465	0.32084

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a009	468	0.99539	1.462	0.911	0.18113

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.8848263	.8102094	1094
Female	2.8547009	.74056472	468
Total	2.8758003	.78987233	1562

W0 = 3.6665018 df(1, 1560) Pr > F = 0.05569931

W50 = 4.9796852 df(1, 1560) Pr > F = 0.02578824

W10 = 3.6037098 df(1, 1560) Pr > F = 0.05783519

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1094	2.884826	.0244956	.8102094	2.836763	2.93289
Female	468	2.854701	.0342326	.7405647	2.787432	2.92197
combined	1562	2.8758	.0199856	.7898723	2.836599	2.915002
diff		.0301255	.0436354		-.0554647	.1157156

diff = mean(Male) - mean(Female) t = 0.6904

Ho: diff = 0 degrees of freedom = 1560

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.7550 Pr(|T| > |t|) = 0.4901 Pr(T > t) = 0.2450

(d) T-test

Figure E.7: Results of all statistical tests done on the variable 'next month risk expectations AEX', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	1108	0.99436	3.904	3.387	0.00035

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a010	474	0.99558	1.418	0.837	0.20135

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.9783394	.91434426	1108
Female	2.9008439	.81000569	474
Total	2.9551201	.88483375	1582

W0 = 6.3459722 df(1, 1580) Pr > F = 0.01186281

W50 = 11.2779536 df(1, 1580) Pr > F = 0.00080298

W10 = 13.0981241 df(1, 1580) Pr > F = 0.00030491

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1108	892055.5	876982
Female	474	360097.5	375171
combined	1582	1252153	1252153

unadjusted variance 69281578
adjustment for ties -7356126.2

adjusted variance 61925452

Ho: dt10a010(geslacht==Male) = dt10a010(geslacht==Female)
z = 1.915
Prob > |z| = 0.0554

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1108	2.978339	.0274688	.9143443	2.924443	3.032236
Female	474	2.900844	.0372048	.8100057	2.827737	2.973951
combined	1582	2.95512	.0222463	.8848337	2.911485	2.998756
diff		.0774955	.0462464		-.0132555	.1682464

diff = mean(Male) - mean(Female) t = 1.6757
Ho: diff = 0 Satterthwaite's degrees of freedom = 1002

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9529 Pr(|T| > |t|) = 0.0941 Pr(T > t) = 0.0471

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0210	0.746	
Female:	-0.0841	0.009	
Combined K-S:	0.0841	0.018	0.015

(f) Kolmogorov-Smirnov test

Figure E.8: Results of all statistical tests done on the variable 'next year risk expectations AEX', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	938	0.99713	1.710	1.325	0.09254

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a011	377	0.99671	0.860	-0.358	0.63986

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.7377399	.82741449	938
Female	2.7771883	.823982	377
Total	2.7490494	.8263112	1315

W0 = 0.58667541 df(1, 1313) Pr > F = 0.44384527

W50 = 0.40662375 df(1, 1313) Pr > F = 0.52379933

W10 = 0.46544830 df(1, 1313) Pr > F = 0.49520898

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	938	2.73774	.027016	.8274145	2.684721	2.790759
Female	377	2.777188	.0424372	.823982	2.693744	2.860632
combined	1315	2.749049	.0227867	.8263112	2.704347	2.793752
diff		-.0394485	.0503963		-.1383145	.0594176

diff = mean(Male) - mean(Female) t = -0.7828

Ho: diff = 0 degrees of freedom = 1313

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.2170 Pr(|T| > |t|) = 0.4339 Pr(T > t) = 0.7830

(d) T-test

Figure E.9: Results of all statistical tests done on the variable 'next month risk expectations S&P 500', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	928	0.99663	1.985	1.693	0.04525

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a012	367	0.98954	2.667	2.325	0.01004

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.7898707	.92899174	928
Female	2.7384196	.88226033	367
Total	2.7752896	.9159455	1295

W0 = 0.52660507 df(1, 1293) Pr > F = 0.46816899

W50 = 0.62559861 df(1, 1293) Pr > F = 0.42911944

W10 = 0.56227870 df(1, 1293) Pr > F = 0.45347999

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	928	605922	601344
Female	367	233238	237816
combined	1295	839160	839160

unadjusted variance 36782208
adjustment for ties -3689091.9

adjusted variance 33093116

Ho: dt10a012(geslacht==Male) = dt10a012(geslacht==Female)
z = 0.796
Prob > |z| = 0.4261

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	928	2.789871	.0304956	.9289917	2.730022	2.849719
Female	367	2.73842	.0460536	.8822603	2.647857	2.828983
combined	1295	2.77529	.0254528	.9159455	2.725356	2.825223
diff		.0514511	.0564841		-.0593594	.1622616

diff = mean(Male) - mean(Female) t = 0.9109
Ho: diff = 0 degrees of freedom = 1293

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8187 Pr(|T| > |t|) = 0.3625 Pr(T > t) = 0.1813

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0007	1.000	
Female:	-0.0268	0.685	
Combined K-S:	0.0268	0.992	0.990

(f) Kolmogorov-Smirnov test

Figure E.10: Results of all statistical tests done on the variable 'next year risk expectations S&P 500', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	299	0.99008	2.107	1.750	0.04010

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a016	67	0.96362	2.161	1.672	0.04731

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.7458194	1.6102464	299
Female	2.3731343	1.4856467	67
Total	2.6775956	1.5927544	366

W0 = 1.6492814 df(1, 364) Pr > F = 0.19987353

W50 = 2.6353544 df(1, 364) Pr > F = 0.1053744

W10 = 1.6492814 df(1, 364) Pr > F = 0.19987353

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	299	56142	54866.5
Female	67	11019	12294.5
combined	366	67161	67161

unadjusted variance	612675.92
adjustment for ties	-45285.17
adjusted variance	567390.75

Ho: dt10a016(geslacht==Male) = dt10a016(geslacht==Female)

z = 1.693

Prob > |z| = 0.0904

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	299	2.745819	.093123	1.610246	2.562557	2.929081
Female	67	2.373134	.1815006	1.485647	2.010757	2.735512
combined	366	2.677596	.0832546	1.592754	2.513877	2.841315
diff		.3726851	.214695		-.0495132	.7948833

diff = mean(Male) - mean(Female) t = 1.7359

Ho: diff = 0 degrees of freedom = 364

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.9583 Pr(|T| > |t|) = 0.0834 Pr(T > t) = 0.0417

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.1116	0.256	
Combined K-S:	0.1116	0.503	0.439

(f) Kolmogorov-Smirnov test

Figure E.11: Results of all statistical tests done on the variable 'Favorite sports team's performance', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	1324	0.99877	1.000	0.001	0.49967

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a017	734	0.99945	0.261	-3.280	0.99948

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.8277946	.83332751	1324
Female	2.8692098	.89826583	734
Total	2.8425656	.85706514	2058

W0 = 1.6401579 df(1, 2056) Pr > F = 0.20044825

W50 = 2.3425477 df(1, 2056) Pr > F = 0.12603736

W10 = 2.3079824 df(1, 2056) Pr > F = 0.12886478

(c) Levene's test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1324	2.827795	.0229019	.8333275	2.782867	2.872723
Female	734	2.86921	.0331556	.8982658	2.804119	2.934301
combined	2058	2.842566	.0188926	.8570651	2.805515	2.879616
diff		-.0414152	.0394397		-.1187612	.0359307

diff = mean(Male) - mean(Female) t = -1.0501

Ho: diff = 0 degrees of freedom = 2056

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.1469 Pr(|T| > |t|) = 0.2938 Pr(T > t) = 0.8531

(d) T-test

Figure E.12: Results of all statistical tests done on the variable 'Current weather perception', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	1324	0.98677	10.774	5.953	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a018	734	0.98308	8.054	5.100	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	5.2454683	1.2366361	1324
Female	5.2956403	1.381443	734
Total	5.2633625	1.2900384	2058

W0 = 19.172494 df(1, 2056) Pr > F = 0.00001254

W50 = 16.471282 df(1, 2056) Pr > F = 0.00005124

W10 = 19.815807 df(1, 2056) Pr > F = 0.00000898

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1324	1347835	1363058
Female	734	770876	755653
combined	2058	2118711	2118711

unadjusted variance	1.667e+08
adjustment for ties	-11400301
adjusted variance	1.553e+08

Ho: dt10a018(geslacht==Male) = dt10a018(geslacht==Female)

z = -1.221

Prob > |z| = 0.2219

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1324	5.245468	.0339858	1.236636	5.178796	5.31214
Female	734	5.29564	.05099	1.381443	5.195536	5.395744
combined	2058	5.263362	.0284367	1.290038	5.207595	5.31913
diff		-.050172	.0612782		-.1703807	.0700366

diff = mean(Male) - mean(Female) t = -0.8188

Ho: diff = 0 Satterthwaite's degrees of freedom = 1378.23

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.2065 Pr(|T| > |t|) = 0.4131 Pr(T > t) = 0.7935

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0664	0.015	
Female:	-0.0120	0.874	
Combined K-S:	0.0664	0.031	0.027

(f) Kolmogorov-Smirnov test

Figure E.13: Results of all statistical tests done on the variable 'spring-autumn preference', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	1324	0.97039	24.120	7.971	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a019	734	0.97490	11.952	6.065	0.00000

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	1.4690332	.70186576	1324
Female	1.5899183	.73646532	734
Total	1.5121477	.71656432	2058

W0 = 5.0488381 df(1, 2056) Pr > F = 0.02474815

W50 = 13.5210017 df(1, 2056) Pr > F = 0.00024196

W10 = 10.0588597 df(1, 2056) Pr > F = 0.00153853

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1324	1316235.5	1363058
Female	734	802475.5	755653
combined	2058	2118711	2118711

unadjusted variance 1.667e+08
adjustment for ties -40766501

adjusted variance 1.260e+08

Ho: dt10a019(geslacht==Male) = dt10a019(geslacht==Female)
z = -4.172
Prob > |z| = 0.0000

(d) Mann-Whitney U test

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1324	1.469033	.019289	.7018658	1.431193	1.506874
Female	734	1.589918	.0271834	.7364653	1.536552	1.643285
combined	2058	1.512148	.0157955	.7165643	1.481171	1.543124
diff		-.120885	.0333317		-.1862685	-.0555015

diff = mean(Male) - mean(Female) t = -3.6267
Ho: diff = 0 Satterthwaite's degrees of freedom = 1452.9

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0001 Pr(|T| > |t|) = 0.0003 Pr(T > t) = 0.9999

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0958	0.000	
Female:	0.0000	1.000	
Combined K-S:	0.0958	0.000	0.000

(f) Kolmogorov-Smirnov test

Figure E.14: Results of all statistical tests done on the variable 'suffering from winter blues', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	1324	0.99188	6.618	4.733	0.00000

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a020	734	0.99146	4.066	3.429	0.00030

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.4871601	.63933883	1324
Female	2.5149864	.67838902	734
Total	2.4970845	.65350575	2058

W0 = 2.6297856 df(1, 2056) Pr > F = 0.1050292

W50 = 1.2960660 df(1, 2056) Pr > F = 0.25506571

W10 = 2.4617068 df(1, 2056) Pr > F = 0.11680584

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1324	1355382	1363058
Female	734	763329	755653
combined	2058	2118711	2118711

unadjusted variance 1.667e+08
adjustment for ties -32988596

adjusted variance 1.338e+08

Ho: dt10a020(geslacht==Male) = dt10a020(geslacht==Female)
z = -0.664
Prob > |z| = 0.5069

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1324	2.48716	.0175706	.6393388	2.452691	2.521629
Female	734	2.514986	.0250398	.678389	2.465828	2.564145
combined	2058	2.497085	.0144054	.6535058	2.468834	2.525335
diff		-.0278263	.0300743		-.0868055	.031153

diff = mean(Male) - mean(Female) t = -0.9253
Ho: diff = 0 degrees of freedom = 2056

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1775 Pr(|T| > |t|) = 0.3549 Pr(T > t) = 0.8225

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0131	0.850	
Female:	-0.0019	0.997	
Combined K-S:	0.0131	1.000	1.000

(f) Kolmogorov-Smirnov test

Figure E.15: Results of all statistical tests done on the variable 'currently feeling (mood)', for the total dataset.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	1324	0.99686	2.556	2.350	0.00938

(a) Shapiro-Wilk test on men

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
dt10a021	734	0.99489	2.432	2.173	0.01490

(b) Shapiro-Wilk test on women

Gender	Mean	Std. Dev.	Freq.
Male	2.6759819	.71269464	1324
Female	2.6103542	.67357176	734
Total	2.6525753	.699535	2058

W0 = 0.75525298 df(1, 2056) Pr > F = 0.38491962

W50 = 0.05838213 df(1, 2056) Pr > F = 0.80909566

W10 = 0.01244448 df(1, 2056) Pr > F = 0.91118727

(c) Levene's test

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

geslacht	obs	rank sum	expected
Male	1324	1384059	1363058
Female	734	734652	755653
combined	2058	2118711	2118711

unadjusted variance 1.667e+08
adjustment for ties -29957343

adjusted variance 1.368e+08

Ho: dt10a021(geslacht==Male) = dt10a021(geslacht==Female)
z = 1.796
Prob > |z| = 0.0726

(d) Mann-Whitney U test

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Male	1324	2.675982	.0195866	.7126946	2.637558	2.714406
Female	734	2.610354	.024862	.6735718	2.561545	2.659163
combined	2058	2.652575	.0154201	.699535	2.622335	2.682816
diff		.0656276	.0321667		.0025449	.1287104

diff = mean(Male) - mean(Female) t = 2.0402
Ho: diff = 0 degrees of freedom = 2056

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9793 Pr(|T| > |t|) = 0.0415 Pr(T > t) = 0.0207

(e) T-test

Two-sample Kolmogorov-Smirnov test for equality of distribution functions

Smaller group	D	P-value	Corrected
Male:	0.0000	1.000	
Female:	-0.0317	0.387	
Combined K-S:	0.0317	0.729	0.709

(f) Kolmogorov-Smirnov test

Figure E.16: Results of all statistical tests done on the variable 'general feeling: optimistic-pessimistic', for the total dataset.