And now in layman's terms please

AN EMPIRICAL ANALYSIS ON THE EFFECTS OF READABILITY OF FINANCIAL DOCUMENTS ON INVESTOR BEHAVIOR

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Οἶδα οὐκ εἰδώς (I know that I don't know anything)

<div align="right">– Plato, Apology 21B: quote of Socrates</div>

Preface

More than seven years ago I started by studies here in Rotterdam and now this thesis marks the end of it. I still remember moving to Rotterdam and being overwhelmed by the new life I was about to take on. In those first few weeks, I could not even imagine the amazing times that lay ahead of me, the people I would meet, and the person I have become today.

I would like to take this opportunity to thank all those people who have enriched my student life and who have helped me in my studies. My friends from high school, for putting the bar unattainably high for me by introducing me to others as your 'smartest' friend. My friends from Laurentius and all those other people I have met here in Rotterdam, without whom my life in Rotterdam would not have been as much fun as it was. My friends from exchange in Sydney, for showing me there is so much more in this world. And a special thanks to study mates for being great company in class, in the library, in Polak and everywhere else. You made my learning experience a thousand times more fun.

With regard to my thesis, I have to thank the 95 respondents who have filled out my survey. I did not expect this many people to respond in such a short time. Most thankfully I am to the people who forwarded my survey to colleagues, family members, partners, and friends. And of course a great thank you to my supervisor, Suzanne Bijkerk. Your immediate and contagious enthusiasm for the topic and your helpful feedback kept my spirits up and my thesis on the right track.

Last but not least, I would like to thank my family for all their love and support. You have always inspired me to reach just a little higher.

I hope you enjoy reading my masterpiece, my thesis.

Dorien M. Bakker

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Table of Contents

List of figures

List of tables

1   Introduction

Since the financial crisis, the regulatory pressure on the financial sector has drastically increased. KPMG listed in their report a staggering number of 38 new regulations and initiatives in the period 2012-2015 (KPMG Financial Services, 2012). These new regulations are primarily aimed to prevent another crisis from happening, but another important aspect of these regulations is to enhance the protection of clients of financial institutions (KPMG Financial Services, 2012). In this thesis, the focus is on the practical effects are of the rules that are aimed to protect investors.

On of such regulations is the regulation regarding undertakings for collective investments and transferrable securities ('UCTIS'). An important aspect of the UCITS Directives[1] is the increased disclosure obligation for UCITS. In 2002 the European Union introduced the simplified prospectus in UCITS III[2]. The aim of the simplified prospectus was to provide the investor with key information about the UCITS, so they could make an informed decision (Consideration 15, UCITS III). In practice, the simplified prospectus could not deliver what the EU was hoping for. The document was still too difficult for (retail) investors (Committee of European Securities Regulators, 2008). Therefore, the EU introduced a new information document with the implementation of UCITS IV[3]: the Key Investor Information document ('KIID'). One of the main changes of the KIID is the language used. Although the simplified prospectus required language that could be easily understood by retail investors, this requirement was not further specified and did not work out in practice (Commission of the European Communities, 2006). The KIID on the other hand gives more guidance to UCITS on the kind of language that is required. Also, the KIID uses more mandatory tables and figures, such as a risk indicator. Research of the IFF Research and YouGov (IFF Research & YouGov, 2009) showed investors find information presented in figures easier to understand than a narrative explanation. So in short, the KIID is supposedly a more easy to read document than the simplified prospectus, but the content and the aim of the two documents is more or less the same.

Disclosure duties, such as the KIID, are well supported by economic theory (the principle-agent problem with information asymmetries), but criticism remains (Loonen, 2015). For example, Loonen (2015)

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[1] The first UCITS Directive stems from 1985.

[2] Directive 2001/107/EC of the European Parliament and of the Council of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) with a view to regulating management companies and simplified prospectuses ('UCITS III').

[3] Directive 2009/65/EC of the European Parliament and the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) ('UCITS IV').

describes five possible negative effects of too much regulation and disclosure. Two of those are specifically about client behavior: moral hazard and the illusion of knowledge. First of all, moral hazard. The large amount of regulation put on the financial sector could lead to a (unjustified) feeling of protection for the client. This could cause clients to feel like they do not bear the full risk of their investment, since they can easily transfer their losses to a third party. Secondly, clients could get the illusion of knowledge caused by all the information they receive. This information could give them the feeling that they have more control than they actually have. In the case of investments, this means that clients feel like they can fully understand the risks involved, while they probably do not oversee all the risks.

1.1 Main question and hypotheses

These criticisms make the need for an evaluation of a document like the KIID essential. As mentioned previously, the aim is to enable investors to make more informed decisions. In this thesis, a more informed decision means that the risk investors perceive lies closer to the actual risks involved than it did with the simplified prospectus. Furthermore, what are the side effects of readability, such as increased confidence? Therefore, the main question of this thesis is:

> *Does readability of financial documents influence the (accuracy of) perceived risks and the confidence of (potential) investors?*

This main question is thus mainly focused on a change in the quality of the information, not so much the quantity. In this context, four hypothesis are derived from the related literature and the theoretical framework:

Hypothesis 1: increased readability of financial documents makes investors better able to estimate their risks.

Hypothesis 2: increased readability of financial documents decreases the variance between the perceived and the actual risk.

Hypothesis 3: when presented with more information, investors are more confident about the perceived risks.

Hypothesis 4: increased readability leads to more confidence of investors about the perceived risks.

The third hypothesis is not about the quality of information, as mentioned previously, but about the quantity of information. This hypothesis is deducted from the related literature and is added, in order to show the validity of the data in comparison with these previous studies.

1.2 Related literature

The related literature can be divided into four subsections: perceived risk, readability, financial education and investor confidence. The KIID is a highly standardized document and the EU stresses that the language used in the KIID is 'clear, succinct and comprehensible' (article 5(1)(b)(i) UCITS Implementing Regulation[4]). This should make the KIID easier to read for investors. Not much research has been done on the effects of more readable financial documents on investors understanding of the contents and the related confidence in this understanding. In general, more readable texts lead to more trade (De Franco, Hope, Vyas, & Zhou, 2015; Lawrence, 2013; Miller, 2010) and a lower prediction error (Barron, Byard, & Enis, 2004; Hodder, Hopkins, & Wood, 2008). Another important aspect is studies by Caskey (2009), namely that ambiguity avers investors avoid information they find too difficult. Meaning, if the KIID is perceived too difficult by these investors, they will look for alternative sources of information, which might not be regulated.

These results do not yet reveal anything about the possible consequences of the KIID on the accuracy of the perceived risk and the confidence of investors in these estimations. Research on financial education could provide more insights. The KIID is provided to investors prior to the actual investment and serves to inform them on the actual risks. It could therefore be seen as education on the risks involved, so investors are better able to estimate the risks involved, and their perceived risks lie closer to the actual risks involved. The actual effects of financial education remain uncertain. Some authors have found a positive relation between financial education and knowledge and behavior (e.g. Allgood & Walstad, 2016; Fernandes, Lynch Jr., & Netemeyer, 2014; Gallery, Gallery, Brown, Furneaux, & Palm, 2011), while other authors have not found this positive relation (e.g. Collins, 2013; Lusardi & Mitchell, 2014; Mandell, 2006). So the expected effect that accuracy will improve with financial education, and thus the handing over of the KIID, is not well supported by the literature on financial education.

The last field of interest is the field of confidence in relation to the amount information. In this field, the main finding of authors is that more information yields a disproportionate increase in confidence relative to the change in accuracy (see for example Gill, Swann Jr., & Silvera, 1998; Hall, Ariss, & Todorov, 2007; Oskamp, 1965; Peterson & Pitz, 1988; S. D. Smith, 2010; Stewart, Heideman, Moninger, & Reagan-

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[4] Commission Regulation (EU) No 583/2010 of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards key investor information and conditions to be met when providing key investor information on the prospectus in a durable medium other than paper of by means of a website ('UCITS Implementing Regulation').

Cirincione, 1992; Tsai, Klayman, & Hastie, 2008). When put in the context of perceived risks and actual risks, more information could increase the accuracy of the perceived risk. Next to this effect, confidence of investors could increase. In this thesis, the parallel between more information and more readable information is drawn. The KIID, as a more readable document, aims to improve the perceived risks and thus the accuracy. The expectation is that a more readable document also increases the confidence of investors in their perceived risk, just like confidence increases when handed more information.

1.3 Methodology and data

The theoretical framework used in this thesis is based on theory of perceived risks and behavioral economics. A mutual fund has a certain risk: the actual risk. In the translation of this risk to investors, some of the actual risk is lost. On one hand, there is a general translation disturbance on the side of the mutual fund. This means the actual risk hardly ever reaches the investor in its purest form. On the other hand, there is the investor specific disturbance. The information that reaches the investor is then interpreted by the investor. The investor is not able to fully understand and comprehend the given information, causing another form of noise. The KIID is expected to influence this last disturbance factor. More readable information, should enable investors to better understand the given information, and therefore understand the risks involved. When estimating this relation, it is the given information, the private information of the investor, and the cognitive biases of the investor that have to be taken into account (following García, 2013).

Looking at confidence, this is seen as an important influence on the actual investment decision. The investor can perceive a risk that is accurate and matches his preferred risk, but if he is very uncertain about the risk he perceives, he will not invest. Therefore, the confidence is also an important factor to study. When estimating the effect of readability on confidence, two control factors are important: the sense of expertise and other variables defining confidence.

The data used for the analysis is obtained via a survey. In this survey, respondents were asked various questions about their (perceived) financial knowledge, experience, demographic characteristics and, most importantly, about the risks they perceive after reading either the KIID or the simplified prospectus and the confidence they have in the estimations they made. The main difference between the KIID and the simplified prospectus used in the survey is the readability; the simplified prospectus is more difficult to read than the KIID. The presented information is either the KIID or the simplified prospectus, making two subsamples. The sample consists 95 observations and the respondents were mainly female and higher educated.

1.4   Results

The results indicate that the KIID does not have a positive effect on the accuracy of the perceived risk. Furthermore, increased readability does not appear to have an effect on accuracy at all. The hypothesis on more information and confidence holds and is well supported by the related literature. This effect was especially visible for the respondents who were presented with the KIID and investors with little experience with mutual funds. The last hypothesis on readability and confidence was not supported by the data. Instead of a positive significant result, a negative result was found, which was only sometimes significant. Interestingly, it appears that the respondents who were least accurate, had a higher confidence level. When controlling for individual effects, the coefficient for the KIID had a negative and significant sign for the subsample of the most accurate respondents. This means that the KIID decreases confidence for the most accurate respondents.

These results are interesting, since the increased readability of the KIID has as an aim to enable investors to make a more informed decision. The analysis done in this thesis does not provide supportive results that this aim is met with the KIID. There is even some evidence that the increased readability of the KIID worsens the situation, through making the least accurate more confident and decreasing confidence of the most accurate. Policymakers should be well aware of the effects of readability and especially the (possible undesired) effects of readability on confidence.

1.5   Conclusion

In conclusion, the results are mixed when it comes to the effects of readability on (accuracy of) perceived risks and confidence. One thing can be said for certain, the desired effects by policymakers are not found in this thesis. Increased readability does not appear to have a positive effect on accuracy and it seems to decrease investor confidence. Further research on the topic of the effects readability on individual investor behavior is necessary to draw further conclusions and give more insights into the whether or not increased readability is a way to improve investor protection.

The remainder of this thesis is organized as follows. First an overview is given of the existing literature on perceived risks, readability, financial literacy, and confidence (2). Then the theoretical framework (3) and the methodology (4) are discussed. A description of the data is provided (5), before turning to the results (6) and the discussion of the results (7). Finally, a conclusion is given (8).

2   Literature review

The main question of this thesis is (in short) whether the introduction of the KIID causes investors to change their behavior. In this chapter the related literature is discussed, starting with the literature related to the theoretical framework of perceived risks (2.1). A more elaborate discussion of the theoretical framework can be found in chapter 3. Secondly, studies on the effects of readability on behavior are presented and different readability indices are discussed (2.2). This is followed by a paragraph on financial education and its effects on knowledge and investor behavior (2.3). Then a paragraph is dedicated to the effects of information on investor confidence, since this is the type of behavior studied in this thesis (2.4). The chapter ends with a short conclusion of the discussed literature (2.5).

2.1   Perceived risk

The main goal of the KIID is to enable investors to make an informed investment decision. This thesis thus contributes to the literature on the investment decision. In this thesis, it is assumed that making more informed decisions is mostly about making the risk perception of the investor more accurate. On the topic of risk, much research has already been done. One part of these studies is about the influence of risk perception on behavior (see for example Dowling & Staelin, 1994; Mishra & Kumar, 2012; Weber & Milliman, 1997). In these studies, the components of risk perception are analyzed and the effects on behavior are researched. Weber and Milliman (1997) for example related risk perception to risky choices. In their research they state that risk perception is not equal across all decision makers. When making risky choices, it is not the preferred risk that changes, but the risk perception. The risk perception is influenced by many different factors.

The perceived risk can be modelled from two sides, the input and the output side (see Figure 2.1[5]). First of all, the output side. The risk perceived consists of a fixed, product category component and a variable, product specific component. The research done on these two subcategories of the perceived risk is mostly done on the effects of, and on, information search and information processing of a decision maker (see for example Dowling & Staelin, 1994; Mishra & Kumar, 2012). A much researched hypothesis is that high perceived risk induces a more intensive information search. The empirical evidence on this topic remains mixed and Mishra and Kumar's results even suggest that this does not hold for mutual fund investors (Mishra & Kumar, 2012). These investors rely more on personal sources of information and the depth of their information processing is lower than investors whose initial perceived risk is lower.

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[5] This is the first part of the model of Dowling and Staelin (1994) on information search and perceived risks.

In this thesis, it is not the output side that is relevant, but more the input side. Dowling and Staelin (1994) go more into detail on this topic in their paper on the effect of perceived risk on information search. The perceived risk is determined by the purchase goals, intended usage, prior knowledge, and involvement. Involvement can be subcategorized into ego involvement (the extent to which someone identifies with the product), purchase involvement (the purchase occasion), and product involvement (product category). All these determinants together make the perceived risk. This model is more elaborate than displayed here and the main focus of their research is on the effects of perceived risk on information search. For this thesis, only this first part is relevant.

Figure 2.1 Perceived risk

In conclusion, the theory of perceived risk indicates that perceived risk is not always equal to actual risk and that in some cases the perceived risk has an effect on the information search and information processing. It is especially this information processing that is a central topic in this thesis. The models shortly touched upon above are further elaborated on in chapter 3.

2.2 Text complexity

As indicated in the previous paragraph, one of the determinants of perceived risk is prior knowledge. The KIID can contribute to the prior knowledge of an investor, since it is handed over prior to the investment decision. The KIID is supposed to be better readable than its predecessor, the simplified prospectus, and therefore it is expected to contribute more to the prior knowledge of investors, making the perceived risk more accurate. The effect of readability on perceived risk is an unstudied topic. In this paragraph, the existing literature on text complexity and investor behavior is discussed.

The understandability of the KIID had been studied by IFF Research and YouGov (2009) before the actual introduction of the KIID. The goal of their research was to find out how to present the information in the KIID, so investors' needs are satisfied and investors are able to comprehend and use the information. They used a quantitative and a qualitative approach. The questions they asked, were mostly right or wrong

questions and they did not go into detail on the risk perception of investors for specific funds. Also, they did not focus on the language used, but mostly on the presentation of the information (e.g. tables or narrative description). They found investors prefer for example the risk indicator over a narrative description of the risks involved. This would imply that the current version of the KIID is the 'most readable' version of the KIID that it could have been.

When looking specifically at the literature on text complexity, not much research is done on the effects of difficulty of financial texts on investor knowledge. A few authors did study the effect of text complexity on investor behavior (Barron & Karpoff, 2004; Barron et al., 2004; Caskey, 2009; De Franco et al., 2015; Hodder et al., 2008; Lawrence, 2013; Miller, 2010; Tan, Ying Wang, & Zhou, 2014). Main findings are that greater readability leads to higher trading volume (De Franco et al., 2015; Lawrence, 2013; Miller, 2010) and lower prediction error (Barron et al., 2004; Hodder et al., 2008).

To start with the first effect on trading volume, Barron and Karpoff (2004) wrote a theoretical paper on the effect of more precise information. They argue that more precise public announcements, lead to homogenizing of the private valuations and more investor confidence about their own price valuation. This confidence will cause investors to take on more speculative positions. So the effect of more readability flows through investor confidence, meaning more confidence will cause investors to trade more (in a world without transaction costs[6]). The question remains, is this confidence in the provider of the information, or confidence in the actual content and interpretation of the information. It appears from other studies that the effect goes both ways, so the confidence in the understanding of information increases (Hodder et al., 2008) and the trust in the provider of the information increases (Lawrence, 2013). Furthermore, it seems also the sentiment of the information in combination with complexity could have an effect on the confidence of the investor in the information and the provider (Tan et al., 2014).

Another interesting effect was found by Caskey (2009). He showed that ambiguity avers investors would likely not use information that is too complex. They would prefer noncomplex aggregate information. If this information is not provided, they will search for other (not regulated) sources of information. From this study one can conclude that it is very important for regulated sources of information to be readable for investors. If they are not, it could be investors will not use the regulated information and look for different sources. Since these sources are not regulated, the regulator has no influence on what is

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[6] Barron and Karpoff (2004) argue in their paper that the existence of transaction costs could reduce or erase the net increase in trade volume when information is more precise.

provided to the investor and whether the investor has enough information to be able to make an informed decision.

2.2.1 Types of indices

In order to (objectively) measure readability, several indices were constructed over the years. The indices used in this study are:

- the Gunning fog index ('FOG');
- the Flesch reading ease score ('FRES');
- the Flesch-Kincaid grade level ('FKGL');
- the Rate index ('Rix');
- the Automated readability index ('Ari'); and
- the Läsbarhetsindex ('Lix').

The calculation methods and score ranges are presented in Table 2.1 below. All scores indicate the level of difficulty of a text. Especially the FOG, FRES and the Lix are regularly used in a financial context (e.g. Lawrence, 2013; Li, 2008; Miller, 2010; M. Smith & Taffler, 1992a; M. Smith & Taffler, 1992b). Although, some scholars argue these measures do not fully comprehend the actual readability. For example, Smith and Taffler (1992b) discussed in their study the difference between readability and understandability. They found FRES and Lix did not fully cover the understandability of a text. In order to measure understandability, not only the complexity is of importance, also the target audience (education and experience). Later on, Loughran and McDonald (Loughran & McDonald, 2014a; Loughran & McDonald, 2014b) argued in two papers the inaccuracy of readability indices for financial texts. They found that for annual reports, the file size was a more accurate measure for readability. Because of the size of the used texts in this study, the indices are used as an indication of complexity.

Because in this thesis the readability indices are used to show the difference in complexity of two tests relatively to each other, the accuracy and appropriateness of the indices for financial texts is of less importance. The differences in readability of the KIID and the simplified prospectus is further discussed in Chapter 5 on the data.

Table 2.1 Readability indices

Index	Range	Calculation method
FOG[7]	6 (easy) − 18 < (very difficult)	$$0.4 * \left[\left(\frac{total\ number\ of\ words}{total\ number\ of\ sentences}\right) + 100 \right.$$ $$\left. * \left(\frac{total\ number\ of\ complex\ words[8]}{total\ number\ of\ words}\right)\right]$$
FRES[9]	0 (very confusing) − 100 (very easy)	$$206.835 - \left[1.015 * \left(\frac{total\ number\ of\ words}{total\ number\ of\ sentences}\right)\right]$$ $$- \left[84.6 * \left(\frac{total\ number\ of\ syllables}{total\ number\ of\ words}\right)\right]\ [10]$$
FKGL[11]	-3.4 (very easy) - ∞ (very difficult)	$$\left[0.39 * \left(\frac{total\ number\ of\ words}{total\ number\ of\ sentences}\right)\right]$$ $$+ \left[11.8 * \left(\frac{total\ number\ of\ syllables}{total\ number\ of\ words}\right)\right] - 15.59$$
Rix[12]	< 0.2 (very easy) − 7.2 < (very difficult)	$$\frac{total\ number\ of\ long\ words[13]}{total\ number\ of\ sentences}$$
Ari[14]	1 (very easy) − 14 < (very difficult)	$$\left[4.71 * \left(\frac{total\ number\ of\ characters}{total\ number\ of\ words}\right)\right]$$ $$+ \left[0.5 * \left(\frac{total\ number\ of\ words}{total\ number\ of\ sentences}\right)\right] - 21.43$$
Lix[15]	< 10 (very easy) − 56 < (very difficult)	$$\left(\frac{total\ number\ of\ long\ words[16]}{total\ number\ of\ words}\right) + \left(\frac{total\ number\ of\ words}{total\ number\ of\ sentences}\right)$$

2.3 Financial education

Another important field of research when talking about prior knowledge, is the effect of financial education on knowledge. So is there actually an effect when educating investors on their knowledge and what is the relation between readability and knowledge? Research on the effect of readability on the knowledge of investors is still to be conducted, but there is a lot of research on the effects of financial

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[7] The range and calculation method is taken from http://www.readabilityformulas.com/.

[8] Complex words are words of three syllables or more. Not included in the complex words are: '(i) proper nouns, (ii) combinations of easy words or hyphenated words, or (iii) two-syllable verbs made into three with -es and -ed endings.' (retrieved on 12/8/2016: http://www.readabilityformulas.com/gunning-fog-readability-formula.php)

[9] Flesch (1948).

[10] When counting syllables, there are a few exceptions. These can be found in Flesch (1948).

[11] The range and calculation method is taken from http://www.readabilityformulas.com/.

[12] The range and calculation method is taken from Anderson (1983).

[13] Long words are words with seven or more characters (Anderson, 1983).

[14] The range and calculation method is taken from http://www.readabilityformulas.com/.

[15] The range and calculation method is taken from Anderson (1983).

[16] Long words are words with seven or more characters (Anderson, 1983).

education on knowledge. In these studies a difference is made between financial knowledge and behavior. Knowledge being the actual financial literacy of an individual and behavior being the actual financial actions an individual takes in life. The main goal of financial education is to eventually influence financial behavior (Hilgert, Hogarth, & Beverly, 2003). The mechanism through which this effect goes is financial knowledge. Since the KIID provides the investor with key information about, among other things, the risks involved with the mutual fund, this document can be seen as a type of education. This education is aimed to inform the investor about the risks involved and the goal is to influence the investor's behavior, namely to make him make informed decisions about his risks. The actual effect of financial education on financial knowledge remains uncertain. Some authors argue that financial education has a positive effect on knowledge and on behavior (e.g. Allgood & Walstad, 2016; Fernandes et al., 2014; Gallery et al., 2011), other authors did not find such results (e.g. Collins, 2013; Lusardi & Mitchell, 2014; Mandell, 2006).

Since the expected effect of financial education is through knowledge, the question arises, does financial literacy affect behavior. In general, the effect is found positive (Allgood & Walstad, 2016; Hilgert et al., 2003; van Rooij, Lusardi, & Alessie, 2011). Hilgert et al. (2003) drew conclusions based on survey answers. They found a positive relation between knowledge and behavior. Another interesting finding is they found a positive relation between behavior and learning from friends and family. This could mean that there is a spill-over effect between the knowledge and behavior of different people, where behavior of one leads to additional knowledge of the other, which in turn leads to changed behavior.

The aspect of learning is further elaborated on in the studies on the effect of financial education on knowledge and behavior. As said before, the effect is not clear cut. The authors have used several different methodologies to test for the effect, ranging from (field) experiments to surveys. For example, Collins (2013) did a field experiment with low income families who could receive financial education. As a control group he used families that were placed on the waiting list for the education program. The outcome of the experiment was not straightforward. At first glance, it seemed the families who received education performed worse than the control group, but the actual motivation for the negative behavior was not measured and could actually be positive (more long term planning). Fernandes et al. (2014) performed a meta-study and did find a positive effect of education on behavior. The effect they found was small, but significant. However, when they empirically test the effect of education, they found that other cognitive variables strongly decrease the effect of education on behavior. Another example is Mandell (2006), who used a survey to test for the effect of a financial education course for high school seniors. He found mixed results for the effect of the course on financial behavior. One hypothesis that is tested by Mandell is that

just-in-time education is more effective, because it is immediately relevant for the senior students and therefore contributes more to the effect in behavior. However, he did not find support for this hypothesis in the survey results.

So the overall effect of financial education on behavior remains uncertain. This raised the question among several authors whether investor protection could be covered with just regulation (e.g. Campbell, Jackson, Madrian, & Tufano, 2011). Lusardi and Mitchell (2014) argue that one should not exclude the other. Regulation and education could be complements in directing investors to the right information and enable investors to make an informed decision. When the KIID was introduced, it came along with other regulation regarding investor protection. So the combination between regulation and education can be found here. But the whether the KIID is actually having a positive effect on investor behavior is unclear considering the literature above.

2.4   Confidence

The results presented above indicate that financial education does not have a clear cut effect on financial behavior, even though this feels counter intuitive. The question arises then, with handing the consumer information in the form of a KIID, are we not just trying to make investors more confident about their decisions, without actually improving their behavior? A lot of research has been done on the effect of providing more information on the confidence of people in their answers and predictions (see for example Gill et al., 1998; Hall et al., 2007; Oskamp, 1965; Peterson & Pitz, 1988; S. D. Smith, 2010; Stewart et al., 1992; Tsai et al., 2008). The main finding is that when presented with more information, accuracy did not necessarily increased, but confidence did. Here an analogy can be made with the provision of not more information, but more readable and understandable information. So if readability increases, does confidence also increase?

One of the first studies on this subject was of Oskamp (1965). He conducted an experiment with psychologists to test whether the amount of information had an effect on the accuracy of their judgment and the confidence in their judgment. When information increased, Oskamp found that almost all psychologists became overconfident of their judgment. This means that their accuracy did not increase as much as their confidence did. A more recent study by Tsai et al. (2008) showed the same results. They asked participants to make decisions based on different amounts and types of information and found confidence of the participants increased more than accuracy when more information was provided to them.

The study by Stewart et al. (1992) did not find such conclusive results. They performed three experiment, and only in the laboratory experiment did they find participants were becoming overconfident with the increase of information. In their experiment with weather forecasts, they found that in the field experiments the conditional bias improved, meaning participants were becoming appropriately confident. Even though this study did not find that participants were becoming *over*confident, it did appear that with more information, they did become more confident.

To take it one step further, what is the effect of confidence on behavior, why is it important to know what the effects of confidence are? One would expect that overconfident investors make decisions that might not be in their best interest. Several authors found that more confident investors trade more aggressively, which leads to poor performance of their investments (see for example Barber & Odean, 2000; S. D. Smith, 2010). This would imply that if confidence would be much higher for investors who receive the KIID, this could potentially harm these investors.

On the contrary, Parker, de Bruin, Yoong, and Willis (2012) did not find a negative relation between confidence and financial behavior. They even found that confidence in general (appropriate or not) is a positive factor for more prudent behavior. They reason that confident people will read more of the information and are therefore able to increase their knowledge (see also Loibl, Cho, Diekmann, & Batte, 2009). Parket et al. (2012) further suggests that financial education (in the form of handing over information) can be beneficial for confident investors. So if the KIID could lead to more confident investors, this will lead to a circle in which investors will indeed become more informed. The aim of this thesis is not to study this effect, but to contribute to the literature on primary effect of the KIID on investors' risk perception and confidence.

2.5   Conclusion

Four important fields of study regarding readability, perceived risks and confidence are discussed in this chapter. First, some of the existing literature on perceived risks was shortly discussed. The main focus in the existing literature is on the effect of perceived risks on information search. One of the determinants of perceived risks is prior knowledge. The literature on the effects of readability and financial education on prior knowledge was discussed. Readability seems to have an effect on investor behavior, but not yet examined is the individual effects of readability on perceived risks and confidence. Then an overview was given of the literature on financial education and its' effects on knowledge and behavior. Since the KIID is supposed to contribute to the prior knowledge of investors, the results were analyzed on the general effects of financial education. It appears the results are mixed and no definite answer exists for the effect

of financial education on knowledge or behavior. Lastly, the focus shifted more to the confidence of investors. From the existing literature it seems more information has a positive effect on confidence, but not necessarily on accuracy. The exact effect of more readable information on the (accuracy of) perceived risk and confidence has not yet been subject to an academic study. This thesis hopes to contribute to these fields of research by conducting an empirical analysis on the effect of readability on the perceived risks, the accuracy of perceived risks and and investor confidence.

3 Theoretical framework

As shortly described in paragraph 2.1, the framework used in this thesis is that of perceived risks and confidence. In this chapter the framework is modelled first for perceived risks (3.1), and then for confidence (3.2). The hypotheses are deduced from this theoretical framework and the before discussed literature. An overview of the hypotheses is given in the final part of this chapter, as well as an explanation of the main contributions of this thesis (3.3).

3.1 Risk

In the previous chapter, the current literature on perceived risk is already shortly described. In the paragraph, these theories are combined with actual and preferred risk and a model is constructed. The framework described here is based on several previous studies on the effects of perceived risks (Dowling & Staelin, 1994; Weber & Milliman, 1997). These previous studies mostly focus on the effect of category and product specific risks as two components of overall risk. Here, the focus lies more on the determinants of risk, as described by Dowling and Staelin (1994), and their effects on perceived risk.

In the risk model established here, there are three important risk variables: actual risk, preferred risk, and perceived risk. First of all, there is the actual risk of a mutual fund (R). This risk is defined as the potential losses and the chance of them occurring (Weber & Milliman, 1997). In an equation:

$$R = E(v) = p * v \qquad (1)$$

Where p is the chance of a loss occurring and v is the potential loss. For a mutual fund, the actual risk is unobservable, since it is dependent on too many factors to consider (A. Wang, 2009). What can be observed is the perceived risk of the investor (R_i^*). The perceived risk is dependent upon three factors: i) the actual risk (R), ii) a general disturbance factor for estimating the actual risk (e), and iii) an investor specific disturbance factor for interpreting the given information (s_i). This is a more theoretical display of the other perceived risk models, such as the model of Dowling and Staelin (1994). Many of the there relevant determinants are collected in s_i and are constructed here as a disturbance factor of observing the actual risk. This is modelled as follows:

$$R_i^* = (R * e) * s_i \qquad (2)$$

The actual risk times the general disturbance factor is the risk observed by the mutual fund, this is equal for all investors. The investor specific disturbance factor is different for all investors. In this factor all the disturbance caused by interpretation of the investor is captured. Readability is for example captured by this term, since the expectation is that the actual content of the information document does not change,

just the way it is written down. Ideally e and s_i would be zero, so the perceived risk matches the actual risk. An investor would then invest in a mutual fund if his risk preference r_i matches the actual risks involved:

$$R = R_i^* = r_i \tag{3}$$

In most cases the perceived risk will not be equal to the actual risk. The perceived risk of individuals will be around $(R * e)$, depending on s_i.

$$R_{min}^* \leq (R * e) \leq R_{max}^* \tag{4}$$

When s_i becomes smaller in general, the interval will become smaller as well, making the estimations of investors more accurate. When making a document more readable, it is therefore the expectation that the interval of perceived risks will become smaller, since people are better able to estimate their risks.

Hypothesis 1:   increased readability of financial documents makes investors better able to estimate their risks.

The average perceived risk, or the general perceived risk can be written as follows:

$$R^* = \frac{1}{N} \sum_{i=1}^{N} [(R * e) * s_i] \tag{5}$$

When presented with better comprehendible information, the expectation is that $R^* \rightarrow (R * e)$.

Hypothesis 2:   increased readability of financial documents decreases the variance between the perceived and the actual risk.

3.2   Confidence

The assumptions used in the model above is that all investors are rational and are not hindered by confidence. They are certain of the risk they perceive and make the decision to invest when the risk they perceive is equal to the risk they prefer. In practice, it could be that this equation does not hold up, due to confidence of investors. Investors would perceive a certain risk, but it could be that they are too unsure to act upon it. As Gill et al. (1998) describe it: 'Confidence seems to affect whether people translate their beliefs into behaviors.' So confidence matters in the investment decision (see Figure 3.1) (see also S. A. Wang, 2006). The exact effect of confidence on the investment decision is beyond the scope of this thesis, the focus here is on the origin of confidence (although a preliminary estimation is made in Appendix XIII). As Gill et al. (1998) also wonder: where does this confidence come from?

Figure 3.1 Investment decision
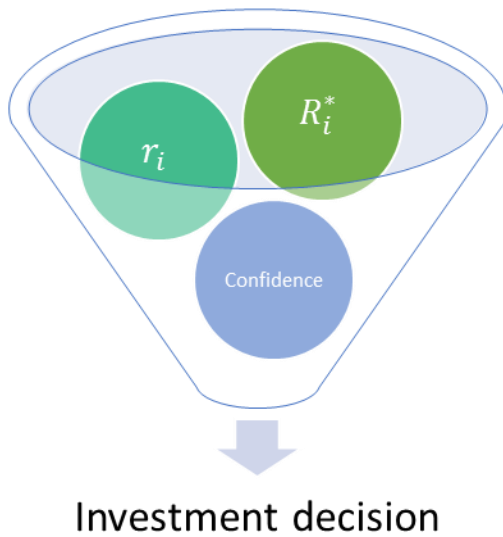
Gill et al. (1998) state that two important variables determine the confidence, being i) representational integration of information and ii) the amount of information (relevant or pseudo relevant). Since in this thesis, only one source of information is used, the KIID, the first variable is left out of scope. As also seen in the Literature review (chapter 2), more information (meaning increasing the quantity of information, not the quality) leads to increased confidence.

$$c_i = a + X'_i \tag{6}$$

Where c_i is the confidence level of an individual investor, a is the amount of information and X'_i are individual investor characteristics. In order to test the used data on validity in comparison to the previous studies on amount of information and confidence, the following hypothesis is added:

Hypothesis 3:   when presented with more information, investors are more confident about the perceived risks.

Now the question remains, what is the effect of *readability* on confidence. When the amount is kept equal, but the difficulty of the texts differ, does confidence also increase? A parallel can be drawn between both more information and representational integration. First of all, more information. As previously mentioned, too complex information could cause investors to fully ignore the information. Therefore, making the information easier to read, might make these investors use all the information and therefore increase the information available to them. Secondly, representational integration. This is the consistency of the information presented to the investor. Too complex information might cause investors to not fully

understand the given information and even for them to feel like it is going against their prior beliefs. Information that is better readable could prevent this from happening and therefore increase confidence. Furthermore, the effect of readability could also be a direct effect. Giving investors information that is better readable, makes it easier for them to understand the information. Having the feeling of understanding, could increase confidence (see Figure 3.2).

Hypothesis 4:   increased readability leads to more confidence of investors about the perceived risks.

Figure 3.2 Expected effects of readability

3.3   Hypotheses and main contribution

In conclusion, the following four hypotheses are tested in this thesis:

Hypothesis 1:   increased readability of financial documents makes investors better able to estimate their risks.

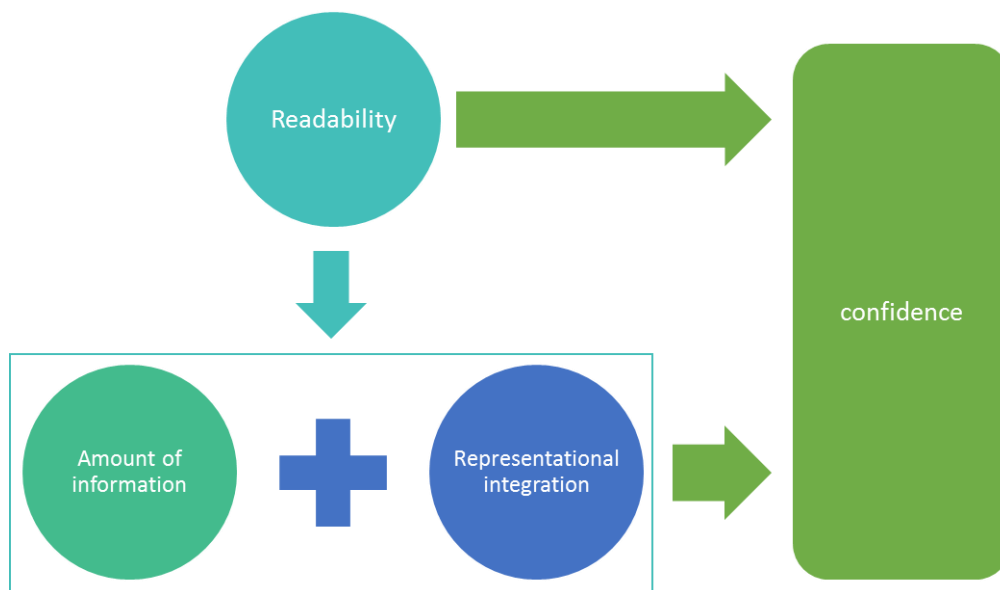Hypothesis 2:   increased readability of financial documents decreases the variance between the perceived and the actual risk.

Hypothesis 3:   when presented with more information, investors are more confident about the perceived risks.

Hypothesis 4:   increased readability leads to more confidence of investors about the perceived risks.

The main focus of this thesis is the effect of readability, meaning the effect of quality of information. Hypothesis 3 is about the quantity of information, in order to test whether the data and the results can

be compared to previous literature. Based on the conclusions on these four hypotheses the main question can be answered:

> *Does readability of financial documents influence the (accuracy of) perceived risks and the confidence of (potential) investors?*

The study conducted in this thesis adds to the literature presented in chapter 2 in the sense that this is the first study on the direct effect of readability on accuracy, perceived risks and confidence of investors. Also, this thesis is the first to reflect on the introduction of the KIID and its effects on investor behavior. It broadens existing literature on the field of readability and confidence, and it reflects on the effectiveness of the introduction of an information document.

4 Methodology

In this chapter the methodology used to test the hypotheses is described. Because the hypothesis all have different dependent variables, the methodology is described for each of the hypotheses. In the following paragraphs the estimation technique and the construction of the dependent variables is discussed. Starting with the first hypothesis (4.1) and ending with the fourth hypothesis (4.4). The data used for the analysis comes from an online survey, which is further discussed in chapter 5.

4.1 Hypothesis 1: accuracy

The first hypothesis is about the accuracy of the perceived risk of investors. With more readable information, the accuracy of the risks the investors perceive is expected to increase. Accuracy means that the perceived risk is equal to the actual risk that can be observed by investors: $(R * e)$. So accuracy can be influenced by s_i. When modelling this, an adjustment is made to the rational expectations assumption, as proposed by Garcia (2013). The rational expectations assumption means that the expectations of actors are based on all relevant information available and that this information is used intelligently by the actors (García, 2013). Garcia indicates that studies on several different fields of study have found that individuals do not act like the rational expectations assumption. Several cognitive factors influence the way individuals acquire and process information. The proposed model by Garcia is a model that combines the rational expectations model and these cognitive limitations. Following this model, the expected effect of readability on accuracy can be modeled as follows:

$$A_i = \alpha + \beta_1 I + \beta_2 P_i + \beta_3 B_i + \varepsilon_i \qquad (7)$$

Where A_i is the accuracy of an individual investor (see paragraph 4.1.1), I is the information received by the individual, P_i is the private information, and B_i are the cognitive biases of individual i. The combination of P_i and B_i is s_i. Since private information is unobservable, educational and economic background, financial knowledge, and experience are used as a proxy. Cognitive biases are also unobservable. In the survey a question regarding the understanding of the presented information is included, this answer is used as a proxy for cognitive biases influencing the respondent's ability to take the presented information in. So the following equation is estimated using OLS:

$$A_i = \alpha + \beta_1 T + \beta_2 X_i' + \varepsilon_i \qquad (8)$$

Where T is a dummy for the individuals who were given the KIID and X_i' are the control variables for private information and cognitive biases, as described previously. The expectation is that more readable information has a positive effect on accuracy. Investors are better able to use this information and to form

expectations based on this information. The effect of private information is also expected to be positive. The proxies used for this variable, like economic background and knowledge, are expected to increase accuracy. More knowledge and experience with economics and mutual funds is expected to give investors more tools to understand and use the given information. Lastly, the cognitive biases are expected to negatively influence the accuracy of the perceived risks. The proxies used are constructed in such a way to higher values indicate less bias. Therefore, the expected effect is positive. All these effects are summarized in Table 4.1.

4.1.1 Measuring accuracy

In the survey the respondents are asked to answer six questions. The respondents are presented with two sets of information and after each set three questions are asked regarding the risks involved in the presented mutual fund (see chapter 5 and Appendix III for the survey). The respondents are asked to answer on a 1 to 7 Likert scale (more on the Likert scale in chapter 5). In order to construct an index for accuracy, for each of these questions an 'optimal' range is set. This optimal range is considered to correspond to the actual risk involved. The optimal range for each of the questions is presented in Appendix I. The accuracy scale looks as follows:

$$A_i = 1 + \sum_{q=1}^{Q} D_{qi} \tag{9}$$

Where D_{qi} is a dummy variable, taking on a 1 if the answers of individual i on question q is answered within the optimal range, and 0 if the answer is outside of the optimal range. The one is added, to make the scale a 1 to 7 scale and to avoid having to deal with accuracy measures equal to zero. The measure for accuracy is then a range between 1 and 7, 1 being the least accurate and 7 being the most accurate.

4.2 Hypothesis 2: variance of the perceived risks

The second hypothesis states that increased readability leads to a decrease in the variance of the perceived risk of investors. As information is more readable, the variance around the actual risk is expected to decrease (see equation 4). To test whether the variance actually decreases with more readable information, the variance of the subsample who received the KIID, is compared to the variance of the subsample who received the simplified prospectus. In order to control for investor specific effects, the following equation is also estimated:

$$V_i^* = \alpha + \beta_1 T + \beta_2 X_i' + \varepsilon_i \tag{10}$$

Where V_i^* is the variance of the perceived risk, T is a dummy variable for the use of the KIID, and X_i' are the control variables for the private information and the cognitive biases, as also used for controlling when estimating accuracy. It is expected that increased readability leads to more accurate estimations of perceived risk and therefore a decrease in the variance. The coefficient of the KIID is expected to be positive, the same as the control variables. This is also displayed in Table 4.1.

4.2.1 Measuring variance of perceived risk

In order to construct the variable for the variance of perceived risk V_i^*, the same questions are used as when measuring accuracy. In order to be able to construct a variable that can be interpreted, so it can be shown is someone is overestimating or underestimating the risk, the answers are rearranged so that 1 always equals low risk, and 7 always equals high risk. The optimal ranges are rearranged as was, to match the new scale. This can be found in Appendix II. The variance is then measured as follows:

$$V_i^* = \frac{1}{Q} \sum_{q=1}^{Q} \left(P_{qi} - A_q \right)^2 \tag{11}$$

Where Q is the number of questions and P_{qi} is the transformed scale of riskiness per question, and A_q is the optimal range. Since the optimal range consists of three possible answers, whenever the answer of a respondent is within the range, the difference is zero. Only when an answer is given outside of the scale, the difference is positive (overestimating risk) or negative (underestimating risk). The difference is then squared, in order to obtain the variance.

4.3 Hypothesis 3: confidence and more information

The third hypothesis is based on the related literature, where multiple times, authors have come to the conclusion that with the provision of more information, people become more confident about their judgments (see chapter 2). Since in the survey all respondents were confronted with added information, there is no control group. So the only thing that can be estimated here is the difference between the first subset of confidence answers (before treatment) and the second set of confidence answers (after treatment). To start, a simple t-test is performed to test whether overall there is a difference between the confidence before and after receiving additional information. Since this t-test does not take into account any individual effects, just taking using the outcome of the t-test does not provide the full picture. Therefore, another methodology is used to measure the treatment effect: a simple OLS regression using panel data. The following equation is estimated:

$$C_{it} = \alpha_i + \beta_1 C_{it-1} + \beta_2 M_t + u_{it} \tag{12}$$

Where C_{it} is the confidence level of investor i at time t, M_t is a dummy for receiving more information in period t, and α_i are cross-section fixed effects. In theory this model is a simple OLS regression using panel data with fixed cross-section and fixed period effects. In order to interpret the period fixed effects, the dummy for period two is added to the estimation. The coefficient of interest is then β_2. If β_2 shows a positive and significant sign, then more information indeed leads to more confidence in investors. Important to notice is that this regression analysis is very basic and the amount of information used to increase the total amount of information is very limited.

4.3.1   Measuring confidence

In order to measure confidence, the questions in the survey are used in which respondents were asked to indicate the certainty with which they answered the question regarding the perceived risk. Respondents are asked to answer this question on a 7 point Likert scale, where 7 means very certain. These six questions can be divided into two subsamples, the first three question which are asked after the information on objectives and investment policy (part 1), and the last three questions, which are asked after the presentation of additional information on risks and past performance (part 2). The measure for confidence is constructed as follows:

$$C_{it} = \frac{1}{Q} \sum_{q=1}^{Q} c_{itq} \tag{13}$$

Where c_{itq} is the confidence level of an individual investor at time t for question q. Important to keep in mind is that the questions regarding the risk preference after the first set of information are different from the questions asked after the second set of information. So the questions regarding the confidence in each time period are not 100% comparable, because not asked is how confident they are now about the same perceived risks. Since there is not a control variable controlling for this effect, it should be taken into account when drawing conclusions on the results.

4.4   Hypothesis 4: confidence and readability

The last hypothesis is about the effect of readability on confidence. As stated in the theoretical framework, the expected effect of readability is direct, through the feeling of understanding, and indirect, through the amount of information and representational integration. In order to test the total effect on confidence, the adjusted rational expectations model as proposed by García (2013) is followed and the following equation is estimated using OLS:

$$C_i = \alpha + \beta_1 T + \beta_2 E_i + \beta_3 X_i' + \varepsilon_i \tag{14}$$

Where E_i is the sense of expertise of an individual investor, and X_i' are other personal characteristics defining confidence. Since both of these are unobservable, proxies are used. For the sense of expertise experience with mutual funds, economic background, and experience with the presented information are used. For the other characteristics defining confidence age is used as a proxy. The estimator of interest here is β_1. If this estimator turns out significant, it shows whether increased readability leads to more or less confidence among investors. The expectation is that this effect is positive, so more readable information gives investors more confidence. The expected effect of the sense of expertise is also positive. Whenever individuals feel like they have expertise in a certain field, they become more confident (García, 2013). So more experience is expected to have a positive effect on confidence. The other variables defining confidence are also expected to have a positive effect on confidence. These expected effects are also presented in Table 4.1.

4.4.1   Measuring confidence

For this measure of confidence, the same answers from the survey are used as described in the previous paragraph. Now, all confidence answers are summed, without reference to the time:

$$C_i = \frac{1}{Q} \sum_{q=1}^{Q} c_{iq} \tag{15}$$

Important limitation of this measure is it does not take into account extreme values. So someone could have answered 1 in half of the questions and 7 in the other half and would still have the same C_i as someone who answered 4 for each of the questions. The measure is therefore not perfect, but for this study it is sufficient.

4.5   Conclusion

All the expected effects described before are presented in Table 4.1 below. In conclusion, the expectation is that the KIID will cause investors to be more accurate about the risks they perceived and become more confident about their risk perception. The expected effect of the KIID on the risk perception is unclear, since the hypothesis simply states that there is a change, not in which direction this change is. The estimation theory is drawn from the adjustments proposed by Garcia (2013) on the rational expectations assumption.

Table 4.1 Expected signs

	Dependent variables			
	A_i	V_i^*	C_{it}	C_i
KIID	+	-		+
Amount of information			+	
C_{it-1}			+	
Education	+	-		
Economic background	+	-		+
Experience with mutual funds	+	-		+
Daily experience with economics	+	-		+
Knowledge of mutual funds	+	-		
Understanding of presented information	+	-		
age				+
Positive feeling				+
useful				+

5   Data

To collect the data necessary for the analysis, a survey is used. The first part of this chapter discusses this survey. In this part the set-up of the survey, the reasoning behind the questions and the reasoning behind the control questions is explained (5.1). In the second part of this chapter the responses are analyzed and conclusions and drawbacks are discussed (5.2).

5.1   Methodology

To answer the main question of this research regarding the confidence of investors in their own risk perception, a survey is used to collect the data. The population which is relevant for this research, (potential) investors in mutual funds, is too large to observe. With a survey, a subsection of this population is researched and when the sample is representative for the population at large, the conclusions can be generalized for the population as a whole (Babbi, 2010). It is important to keep in mind that surveys are in general not very strong in validity. Since the questions in the survey are standardized, it could be that the answers to not fully reflect the answer the respondent has in mind (Babbi, 2010). The answers given in the survey could give a good indication of their answer, but do not give the actual answer. On the contrary, a survey is generally strong in reliability, meaning the survey would reach the same goal every time it is used (Babbi, 2010). Because of the standardized format of the survey, all respondents are faced with the same questions and the same form of framing, unlike for example in an interview. These characteristics are further discussed in the context of the survey used in this research in paragraph 5.2. The rest of this paragraph is organized as follows. First the main part of the survey is discussed (5.1.1) and then an overview is given of the control variables included in the survey (5.1.2).

5.1.1   Survey

The survey used in this research consists of six parts. The set-up of the survey is presented in in Figure 5.1 (the full survey can be found in Appendix III). The parts 'KIID or simplified prospectus part 1' and 'KIID or simplified prospectus part 2' are the main parts of the survey. The respondents either are presented with the KIID or the simplified prospectus. The information from the KIID is taken from the KIID of the Insinger de Beaufort Multi-Manager Defensive Balanced Fund in both Dutch and English (date: April 22, 2016). All names are taken out of the information, so respondents would not be biased by these names. The information from the simplified prospectus is constructed, using an example of a simplified prospectus[17], an example of a 'Financiële bijsluiter'[18], the full prospectus of the Insinger de Beaufort Manager Selection

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[17] Multiple Managers SICAV: Simplified prospectus dated 15th July 2012.
[18] Insinger de Beaufort Manager Selection SICAV: Insinger de Beaufort Multi-Manager Defensive (date: April 2011).

SICAV (date: 18 January 2016) and a comparison of the requirements of the KIID and the simplified prospectus.

Figure 5.1 Setup of the survey
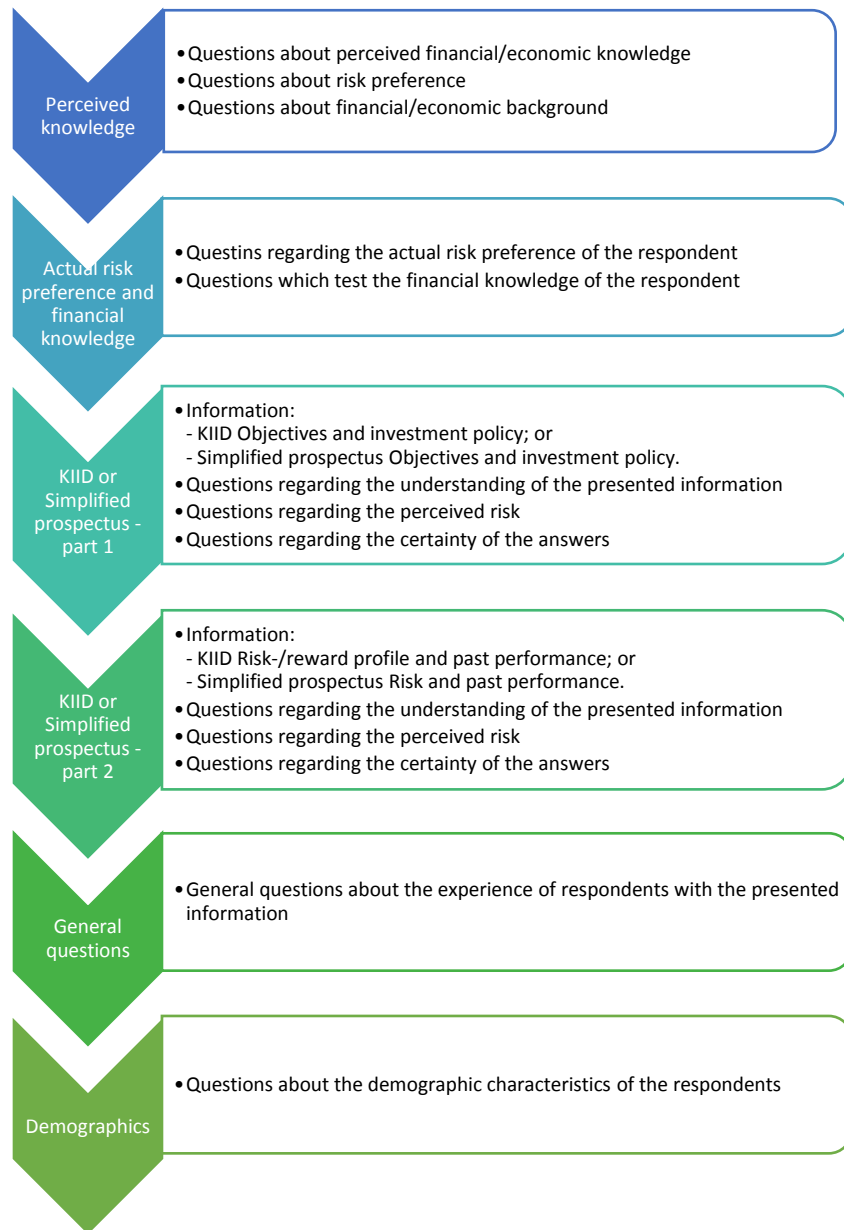
The KIID and simplified prospectus are divided into two parts: Objectives and investment policy (and by law mandatory introduction of the KIID) and Risks and past performance. After either of these parts, the respondents will be asked three questions about the risks of the presented fund and how certain they are about their answer. The questions regarding the perceived risks are based on the questions from the research of IFF Research and YouGov (2009) on the preferred presentation of the information in the KIID.

The main difference with their research is that in their study, the questions were true or false questions or questions in which respondents were asked to compare two different funds. In this study, the questions are made more general and respondents are asked to indicate the extent to which the statement applies to the presented fund on a seven point Likert scale. The seven point Likert scale is chosen, because a scale with more option, does not seem to improve validity and with an uneven number of option, the respondents are able to choose the 'neutral' option (4) (Allen & Seaman, 2007).

The main difference between the KIID and the simplified prospectus presented to the respondents is the difficulty of the texts. The critique on the simplified prospectus, and the most important aspect of the KIID, was mostly the difficulty of the text. The commission stresses that the information presented in the KIID should be written in such a way, an average investor can understand the content and make an informed decision. The difference in difficulty between the two texts is measured by different readability indices, previously discussed in the literature review. The values of these indices for the KIID and the simplified prospectus are presented in the Table 5.1.

Table 5.1 Readability indices

	KIID		SP	
	NL	ENG	NL	ENG
FOG	18.93	14.75	22.76	21.01
FRES	19.07	44.08	5.49	26.70
FKGL	14.71	11.42	18.48	16.02
Rix	5.78	4.94	8.81	15.08
Ari	15.39	11.45	19.75	17.82
Lix	59.58	51.93	67.77	69.97

To test whether the differences between the indices for the KIID and the simplified prospectus are significant, a t-test is performed. To perform this t-test, the indices are calculated for every subsection of the KIID and the simplified prospectus[19]. As can be seen in Table 5.2, the English and Dutch texts do not differ significantly in difficulty as seems from most of the readability indices. Furthermore, especially the English simplified prospectus differs significantly in difficulty from the simplified prospectus. For the Dutch version, this result does not seem so strong from the table below. An important point to keep in mind is that the readability indices might not be as appropriate for assessing the difficulty of Dutch texts. In order to control for this weakness, the general rules on writing in plain English from the U.S. Securities and

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[19] The subsections risks and past performance are taken as one subsection, because the subsection past performance only consists of one sentence in the simplified prospectus. If taken separately, the indices could not capture the appropriate difficulty of this subsection.

Exchange Commission (1998) are used to check the differences in difficulty between the KIID and the simplified prospectus.[20] Based on these pointers the KIID seems to have on average shorter sentences, somewhat less complex words, less complex sentences, less financial jargon and less (unnecessary) detailed information. In conclusion, both texts score very high on difficulty, but the simplified prospectus is significantly more difficult to read than the KIID.

Table 5.2 Text comparisons

	NL vs ENG		KIID vs SP	
	KIID	SP	NL	ENG
FOG	-1.870	-1.532	-2.082	-4.477**
FRES	1.880	3.082*	1.515	2.355*
FKGL	-1.761	-2.252	-2.357*	-3.281**
Rix	-1.019	-0.753	-3.752**	-5.253**
Ari	-1.346	-1.996	-1.875	-3.783**
Lix	-0.801	0.076	-1.437	-3.789**

H_0: mean value of KIID NL/ENG = mean value of SP NL/ENG or mean value of KIID = mean value of SP. * Significant difference at 10% significance level; ** Significant difference at 5% significance level; *** Significant difference at 1% significance level.

5.1.2 Control variables

To be able to control for respondent specific characteristics in the analysis and to check for the representativeness of the sample, some control questions are included. These questions are about financial literacy, financial and economic experience, risk preference, perception of the presented texts, and demographic characteristics. The relevant questions can be found in the survey in Appendix III.

5.1.2.1 Financial literacy

Financial literacy means the degree to which people are able to understand financial concepts and act upon this understanding in making financial decisions (Remund, 2010). As presented in the literature review, financial literacy lies very close to the subject researched here. In financial literacy papers, the effect of financial literacy on behavior and the effect of education on financial literacy is tested (e.g. Allgood & Walstad, 2016; Gallery et al., 2011; van Rooij et al., 2011). The information that is presented in the survey, could be seen as a type of education to the respondents and the perceived risk as a form of

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[20] Tan, Ying Wang and Zhou (2014) also use the pointers of the SEC as a measure for readability. These pointers include avoiding long sentences, passive voice, weak verbs, superfluous words, legal and financial jargon, numerous defined terms, abstract words, unnecessary details, unreadable design and layout (U.S. Securities and Exchange Commission, 1998).

behavior. Therefore, the financial literacy with which the respondents start the survey is an important factor to control for.

As seen in the literature, not only actual financial literacy can be of influence on behavior, also perceived financial literacy could have an effect (Gallery et al., 2011; Parker et al., 2012; van Rooij et al., 2011). In this survey both types of financial literacy are included. The questions are taken from van Rooij et al. (2011). The expected effects for both perceived as actual knowledge, are positive. If someone has a higher level of financial literacy, the respondent will be able to better understand and process the given information, making it easier to understand the question and give a confident answer. Perceived knowledge could also have an effect on the dependent variable. When a respondent perceives his knowledge as high, it is likely he will also perceive his given answers as correct and therefore be more certain about the answers.

Lastly, it is often said that financial literacy does not only come from education, but mostly from experience. The expectation is that people who work in the financial sector, or come across financial products during their daily life, would score their answers as more certain. Therefore, four questions about the experience the respondent has with economics (education and daily life), mutual funds, and the presented information are included. The expectation is that more experience has a positive effect on the confidence of someone answering the questions about the risks. These questions are taken from the research of van Rooij et al. (2011).

5.1.2.2 Risk preference

The main question in this thesis is whether information has an effect on the degree of certainty with which respondents answer questions about perceived risks. The way people perceive risks is mainly dependent on their risk preference. To control for the degree of risk aversion, two questions are included in the survey about risk preference. One question is the self-assed risk preference of respondents. This question is based on the risk assessment of FinMetrica, used by Guillemette, Finke and Gilliam (2012) in their empirical research on which questions regarding risk preference best explain actual behavior. They have found questions regarding the self-assessment did a better job in explaining the composition of a portfolio than more traditional Arrow-Pratt questions (about consumption smoothing). The other question is a staircase procedure for risk aversion. Falk et al. (2016) found this type of question, together with a self-assessment question, yielded the highest correlation with actual behavior. In the staircase procedure, the respondent answers five questions on whether they would prefer a sure payment or a random draw with a 50/50 percent change of receiving nothing. The first question is the same for all respondents, but the

following questions are selected based on the answer given in the previous question. This procedure makes it possible to get a detailed picture of the respondents risk preference, with only five questions. So both the risk staircase and a question regarding the self-assessed risk preference of respondents, are included in the survey.

5.1.2.3   Demographic characteristics

The literature on financial literacy found that several demographic characteristics had a significant effect on the level of financial literacy. The most commonly used demographic control variables included are gender, age and education (Allgood & Walstad, 2016; Hastings, Madrian, & Skimmyhorn, 2013; Parker et al., 2012; van Rooij et al., 2011). Other demographic control variables that could be important for this research are marital status, nationality and employment or work status. Marital status and employment or work status were included in the research of van Rooij et al. (2011), when estimating the relation between participation in the stock market and financial literacy. These controls could also have an impact on the dependent variable of interest in this research and are therefore included in the survey. Employment or work status is also included in the control variables, in order to control for, for example, students. Students are very experienced in the processing of large amounts of (complex) information. This ability could bias the results, if it is not controlled for. Lastly, nationality is included, to control for non-English or non-Dutch speaking respondents. The survey is either presented in Dutch or in English. When neither of these languages is the mother tongue of the respondent, it could be that the results are influenced.

5.2   The sample

The survey was created in an online survey tool and distributed via e-mail and Facebook. In total 97 responses were collected, of which two responses were not complete or showed signs of disinterest of the respondent. These two responses were deleted from the sample, leaving 95 respondents. The dataset is a cross-section dataset, since the observations were made at one point in time. The sample was not randomly selected. Since it was distributed through the network of the author, it can be expected the sample is very high educated and young. Therefore, it is expected the results of this study cannot be generalized for the population as a whole. Since this study is the first of this kind, this does not impose a problem yet.

In the dataset, two subsamples can be found: respondents who were presented the KIID and respondents who were presented the simplified prospectus. Of the 95 respondents 49 received the information based on the KIID, and 46 respondents received the information based on the simplified prospectus. The

allocation of the two subsamples was at random done by the thesis tool used[21]. A full comparison of the two subsamples can be found in Appendix V: Table IV. In this table the mean values, the standard deviations of the variables and the median values are presented and the subsamples are tested on equality. This is done via a simple t-test and via a Kruskal-Wallis test. The Kruskal-Wallis test is a more appropriate test for equality when dealing with ordinal variables, like the variables based on the Likert scale (Allen & Seaman, 2007). The Kruskal-Wallis test does not use mean values, but makes use of the rank options from the variable. An important assumption of the Kruskal-Wallis test is that the observations are independent, as is the case in this study (Kruskal & Wallis, 1952). In the remaining part of this chapter the most important implications of the sample are discussed, starting with same demographic characteristics (5.2.1). Then the results of the self-assessment are presented (5.2.2) and the main findings on the financial knowledge of the respondents (5.2.3).

5.2.1   Demographic characteristics

The demographic characteristics of the sample are displayed in Appendix IV and in Appendix V, the subsamples are compared. Figure 5.2 gives a more detailed overview of the gender distribution and the educational background of the respondents. First of all, the female and male respondents are not evenly distributed over both subsamples. The female population of the respondents were significantly more exposed to the simplified prospectus, than to the KIID. This makes the two subsamples not fully comparable. When drawing conclusions from the subsamples, this should be kept in mind.

Regarding the (economic) education of the respondents, one can conclude that a large portion of the respondents received university education or higher and more than 50% of the respondents answered that economics played an important role in their education[22]. This is a substantially higher percentage than the total population of, for example, the Netherlands[23]. The question remains than, how does this percentage compare to the population of (potential) investors in mutual funds? Considering only roughly 18% of the Dutch households hold financial assets and of these 18%, 25% are in the richest 10% of households[24]. Although the academic support for the hypothesis that higher education leads to higher income is scarce, the CBS (2011) reported that the higher educated earned about twice as much as lower

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[21] The tool used was the trial version of qualtrics (www.qualtrics.com).

[22] Included are respondents who answered the question 'how much of your education was devoted to economics?' with a 5 or higher.

[23] Roughly 25% of the Dutch population (aged 15-65) received higher education (including higher vocational education) (CBS, 17 May 2016).

[24] Richest households is defined as the highest 10% percentile income households. 'Samenstelling vermogen; particuliere huishoudens naar kenmerken' CBS, 2 December 2015; 'Huishoudens; grootte, samenstelling, positie in het huishouden, 1 januari' CBS, 8 December 2015.

educated people. Considering the main market for mutual funds, higher educated people make up the largest part of it. Therefore, the high percentage of higher educated respondents in this sample, does not seem to cause a problem beforehand.

Figure 5.2 Demographic characteristics
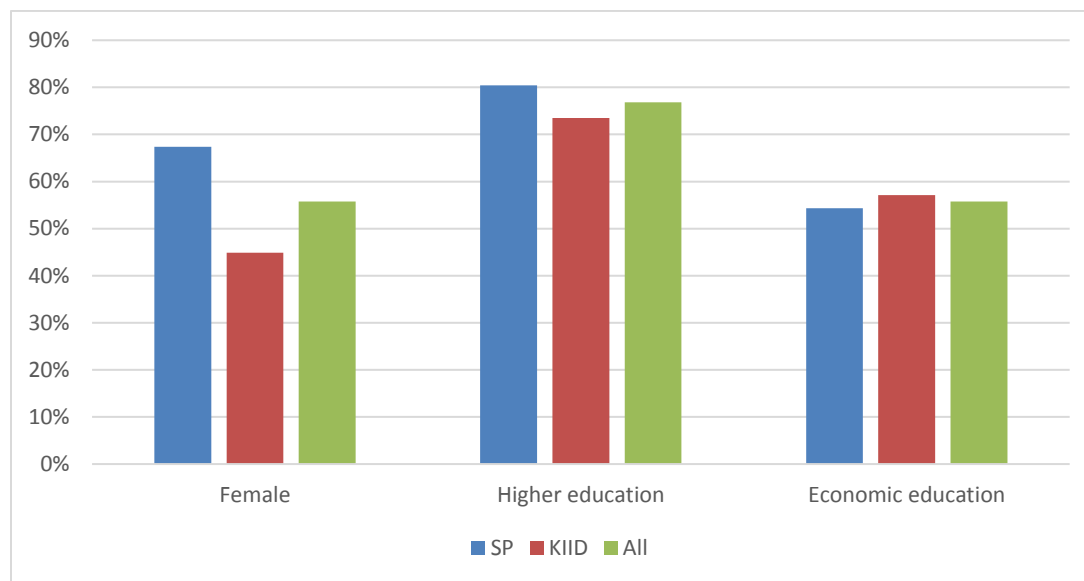
The high share of economic educated respondents is something that has to be kept in mind when drawing conclusions of the results. These respondents are expected to have more knowledge about and experience with the type of information presented in the survey. It is therefore likely they are more confident about their answers. As a result of this high share, the results are less general to the population as a whole, since the largest part of the population is under represented in the sample. Nevertheless, because the sample is probably more than average capable of understanding the presented information, the expectation is that the possible effects will be larger for the population as a whole.

Since the survey was conducted online, the expectation is the majority of respondents will be young. When looking at the age distribution of the respondents, most respondents are indeed in their twenties (see Appendix VI: Graph I). The least represented age group is between the age 40 and 50. It can be expected that the young age groups have the least experience with mutual funds, while older age groups might have experience with mutual funds. It is important to keep in mind that this age group is missing. The results found in this research are therefore not applicable to this age group.

A final important aspect is the language, since there is a difference between the Dutch and the English version of the information (as also seen in paragraph 5.1). For the Dutch information, the difference in

readability was less profound based on the readability indices. The distribution of language and whether it is the mother tongue of the respondent is presented in Table 5.3. Most respondents made the survey in their mother tongue and most respondents choose to do the survey in Dutch. Only a small amount of respondents made the survey in English, when English not being their mother tongue. It is expected that this distribution does not impose major difficulty on the analysis.

Table 5.3 Language distribution

	All		KIID		SP	
	MT	NMT	MT	NMT	MT	NMT
English	5	8	3	6	2	2
Dutch	82	0	40	0	42	0

MT = survey made in language that is the mother tongue, NMT = survey made in a language that is not the mother tongue.

5.2.2   Self-assessment

The respondents were also asked to assess their own knowledge and experience on a scale from one till seven. The means are presented in Figure 5.3[25]. Overall, the respondents who were presented the KIID showed assessed their knowledge and experience slightly higher than the respondents who were presented the simplified prospectus. But when the means of the subsamples are tested, only the willingness to take risks seems to be significantly higher in the subsample presented with the KIID (see Appendix V: Table IV). The self-perceived willingness to take risks could affect the certainty with which respondents answer the risk questions. When estimating the results, this should be controlled for. In general, the sample assesses its' understanding of economics above average and its' use of economics in their daily life is on average a fair bit. These results are similar to the ones found in the previous subsection on demographics.

When taking a closer look at the experience of the respondents with mutual funds and the presented information, it seems the respondents who were presented with the KIID have more experience with mutual funds and the KIID (see Figure 5.4[26]). The distribution of the given answers is included in Appendix VI: Graph I. This graph shows the differences in answers are not as large as Figure 5.4 suggests. For example, only one respondent who was shown the KIID indicated his experience with mutual funds with a four, while five respondents who were presented the simplified prospectus indicated their experience

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[25] Keep in mind that since these answers are of ordinal character, the mean values do not fully depict the essence of the variable. The Kruskall-Wallis test statistic is given in Appendix V: Table IV.
[26] A fair bit is described as having answered with a 5 or higher on the relevant questions.

with mutual funds with a four. This is also confirmed by the Kruskal-Wallis test statistic, which shows the subsample are drawn from the same population (Appendix V: Table IV). Interestingly, almost 37% of the respondents indicated to have no experience with mutual funds, while only 15% of the respondents reported to have no experience with the presented information. A possible explanation could be that the respondents were familiar with this type of information, but have not actually used it in practice. To illustrate this further, the distribution of the given answers is included in Appendix VI: Graph I.

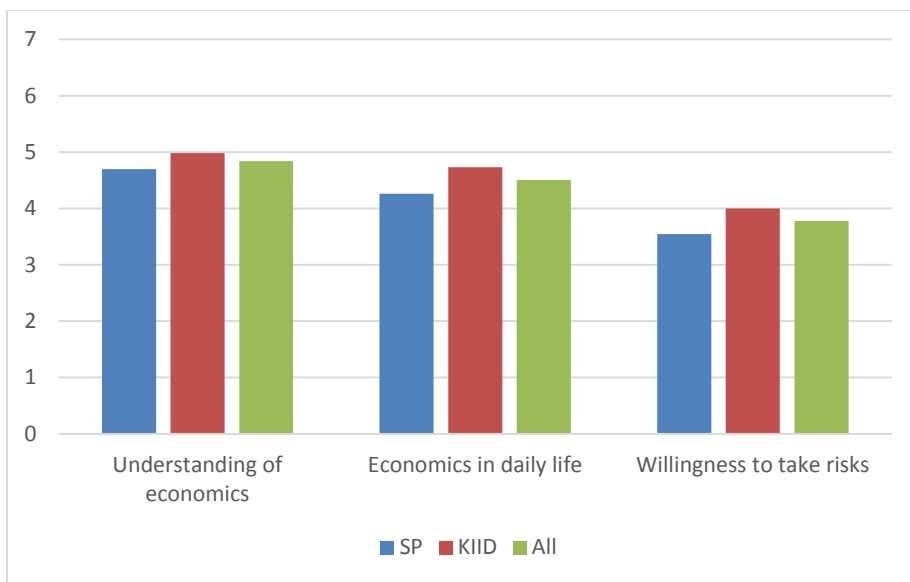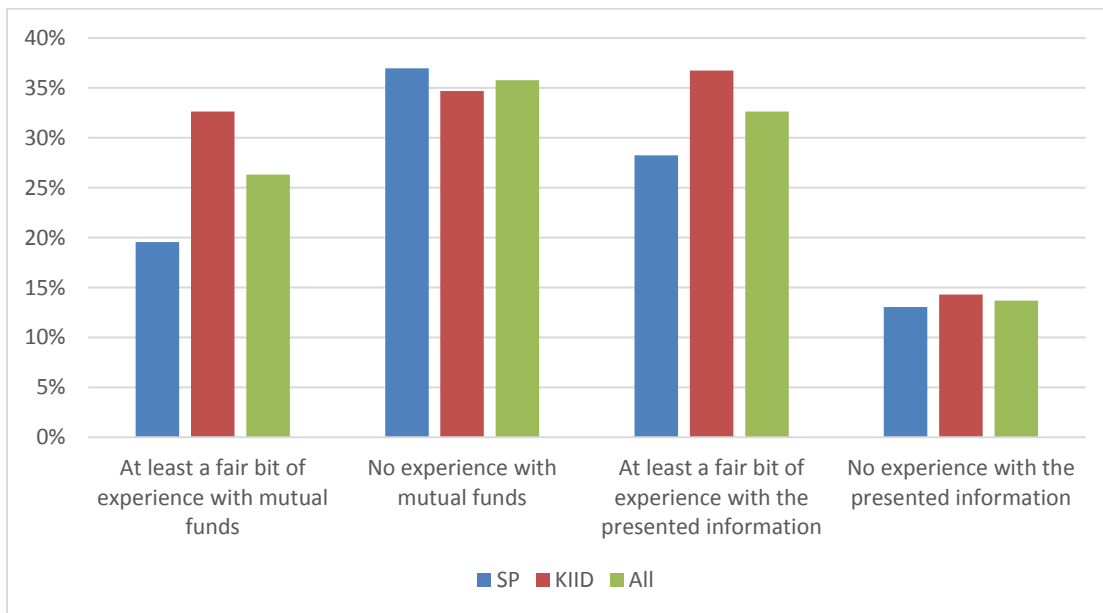*Figure 5.3 Self-assessment characteristics (mean values)*

Figure 5.4 Experience of respondents

5.2.3 Financial knowledge

Lastly, some remarks on the questions that tested the financial knowledge of the respondents. In general, the respondents did very well. They performed better than other studies have found previously (for example Lusardi & Mitchell, 2014). This is probably due to the educational background of the respondents. Figure 5.5 shows the percentage of respondents who answered all questions right. As could be expected, this share is much higher for the basic financial knowledge ('BFK') questions, than for the advanced financial knowledge ('AFK') questions. A detailed overview of the given answers per question and per subsample is given in Appendix IX: Table V. As can be seen there, the respondents had the most difficulty with the questions regarding the working of stocks and mutual funds, and the fluctuation of financial assets. Overall, there is no significant difference between the financial knowledge of both subsamples (see Appendix V: Table IV).

Figure 5.5 Financial knowledge
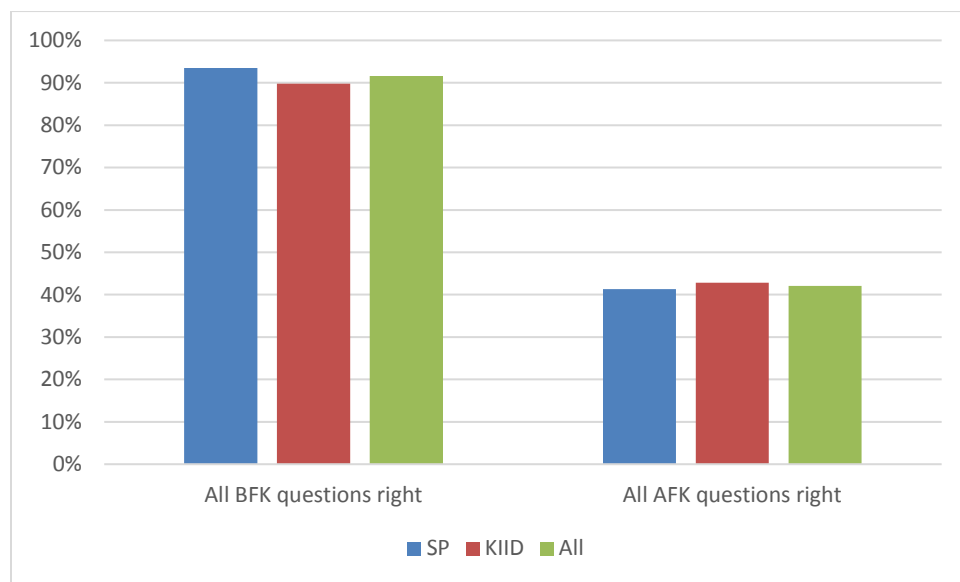
5.3 Conclusion

The sample used in this thesis is collected via an online survey. The respondents are mainly higher educated women and roughly half of the respondents has an economic background. The two subsamples based on the type of information presented (KIID or simplified prospectus) are comparable, but caution should be kept when generalizing the results. Most of the respondents did not have any experience with mutual funds and in general, the experience with the information presented is low. This means many respondents have read the presented information for the first time. Especially for the respondents who have no economic background and no previous experience with mutual funds, the readability indices give

a good estimation of the difficulty of the texts. For these respondents, both texts are extremely difficult, where the KIID is slightly easier to read than the simplified prospectus.

6 Results

Using the dataset and the methodology presented in the previous chapters, the hypotheses are tested in this chapter. The results are also tested on robustness, in order to strengthen the conclusions. First, the hypothesis on accuracy is tested (6.1). This is followed by the analysis of the variance (6.2) and a panel data analysis of the hypothesis on confidence and amount of information (6.3). Lastly, the hypothesis on the effect of readability on confidence is tested (6.4). The results are further discussed in the discussion (chapter 7) and summarized in the conclusion (chapter 8).

6.1 Hypothesis 1: accuracy

The first hypothesis states: increased readability of financial documents makes investors better able to estimate their risks. Before going more into detail about the accuracy, an interesting question is, is there a difference in the way investors perceive their risk in general, between investors who received the KIID and investors who received the simplified prospectus. An indication of this effect in presented in Table 6.1. From this table it seems that investors who were presented with the KIID estimated their risk significantly higher than investors who were presented with the simplified prospectus. This is especially true for part 1. Part 1 and part 2 refers to the questions in the survey. The set-up of the survey allows further to split the questions into two parts. The first part is after the first set of information (Objectives and investment policy) and consists of questions regarding the spread of risks ('part 1'). The second part is after the second set of information on the risk on return and past performance and consists of questions regarding the risk on return ('part 2'). Part 2 consists of more general mutual fund questions, and part 1 consists of very specific questions regarding that specific mutual fund (see Appendix III for the questions).

Table 6.1 Perceived risk equality tests

		All	KIID	SP	t-value[1]
Overall	Mean (st. dev.)	3.918 (0.542)	4.007 (0.539)	3.822 (0.536)	-1.671*
Part 1	Mean (st. dev.)	3.765 (0.794)	4.007 (0.722)	3.507 (0.794)	-3.212***
Part 2	Mean (st. dev.)	4.070 (0.870)	4.007 (0.904)	4.138 (0.836)	0.731

[1]H_0: $\mu_{KIID} = \mu_{SP}$, H_a $\mu_{KIID} \neq \mu_{SP}$. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

The result above does not say anything about the accuracy of the risk estimations. Before testing the hypothesis on accuracy using a regression analysis, the accuracy of the two subsamples is tested via a t-test and the Kruskal-Wallis test. As can be seen in Table 6.2, at first sight there does not seem to be a difference between the accuracy of the subsample that received the KIID and the subsample that received the simplified prospectus. When dividing the result into part 1 and part 2, a significant difference is only found for part 1. This could be due to the more specific nature of these questions, where the answers are to a larger extent dependent on the presented information.

Table 6.2 Accuracy equality tests

		All	KIID	SP	t-value[1]	Kruskal-Wallis[2]
Overall	Mean (st. dev.)	4.621 (1.248)	4.735 (1.132)	4.500 (1.362)	-0.915	
	Median	5.000	5.000	5.000		0.696
Part 1	Mean (st. dev.)	2.674 (0.928)	2.857 (0.866)	2.478 (0.960)	-2.022**	
	Median	3.000	3.000	2.500		3.181*
Part 2	Mean (st. dev.)	2.947 (0.777)	2.878 (0.781)	3.022 (0.774)	0.903	
	Median	3.000	3.000	3.000		0.819

[1]H_0: μ_{KIID} = μ_{SP}, H_a μ_{KIID} ≠ μ_{SP}. [2]H_0: the two subsamples come from the same population, H_a: the two subsamples do not come from the same population. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

The t-test and the Kruskal-Wallis test do not allow us to make any statement on which subsample is more accurate, only whether or not there is a difference between the two groups. A regression analysis should give more insight in this question. Before estimating the equations, a consideration about the use of logarithms should be done. One of the advantages of the use of logarithms is that the coefficients represent (semi)elasticity (Verbeek, 2012). When looking at the data used in this thesis, most of the data has an ordinal nature. This means that the values of the data only mean something relative to the other values. When using logarithms, a big assumption should be made: namely that the different steps within the ordinal scale, are all equal (Nevill & Lane, 2007). For this basic analysis here, this could be assumed.

For easier understanding of the results from this ordinal variables, chosen is to not logtransform the variables. So all the results found below, are absolute values.

The result of the estimation of equation 8 for the accuracy overall is presented in Table 6.3 in the first column. Before discussing the results, some tests are done to test the estimation on heteroskedasticity, autocorrelation, multicollinearity and normality of the residuals. The tests for heteroskedasticity and autocorrelation are given in Table 6.3. Both do not appear to be a problem in this estimation. When looking at multicollinearity, the Pearson correlations and the Variance Inflation Factors are calculated (see Appendix X and Appendix XI). Whenever two variables have a higher correlation than 0.5, the two variables are looked at with more caution. For the VIF a critical value of 2 is taken into account. Whenever the VIF is larger than this value, multicollinearity might be an issue for this variable in the equation and the possible issues are discussed in this chapter. If multicollinearity is not expected to be a problem, it is not further discussed. Lastly, the residuals are tested for normality. This is one of the adjusted Gauss-Markov assumptions for estimators using OLS. The Jarque-Bera statistic is added in the tables, in order to show when the residuals follow a normal distribution. For this estimation, the residuals are normally distributed.

Now taking a look at the results, the first thing that stands out is that the coefficient of the KIID is positive, but not significant. So in this estimation, the KIID does not seem to have a significant effect on how accurate someone is in the estimation of risks. Furthermore, the F-test shows that the coefficients are jointly not significantly different from zero. It appears the estimation does not have any explanatory power. Since economic education and the daily experience of respondents with economics are positively and highly correlated (0.505), in column two these two variables are left out. So column 2 shows the estimation without the economic background of the respondents, but the results do not improve. The sign of the coefficient for understanding the presented information even turns to negative, where previously it was positive. So the variables used here to explain the accuracy of a respondent do appear to be correct.

In order to get a better understanding of these results, the same equations are estimated for the two separates parts (part 1 and part 2). The results are presented in Table 6.3 column 3-6. As expected from the t-test and the Kruskal-Wallis test, the coefficient for the KIID in part 1 is significant and positive. Interestingly, the coefficient for the KIID in part 2 is negative and not significant. So for the part with the more general mutual fund questions, the readability of information does not appear to have a significant effect.

Table 6.3 Results accuracy

	Dependent variable					
	A_i		A_i part 1		A_i part 2	
	1	2	3	4	5	6
c	5.725***	5.235***	2.961***	3.013***	3.650***	3.115***
KIID	0.194	0.193	0.368*	0.363*	-0.172	-0.177
Education	-0.113		0.011		-0.118	
Economic education	-0.027		0.021		-0.049	
Experience with mutual funds	0.131*	0.121*	0.060	0.063	0.074	0.052
Daily experience with economics	-0.054		-0.007		-0.047	
Knowledge about mutual funds	-0.121	-0.146	-0.107	-0.102	-0.015	-0.054
Understanding of presented information	0.005	-0.036				
Understanding of presented information (1)			-0.034	-0.024		
Understanding of presented information (2)					0.048	0.023
R^2	0.055	0.041	0.065	0.064	0.075	0.025
N	95	95	95	95	95	95
F-statistic	0.730	0.968	0.869	1.541	1.005	0.576
White test statistic	42.504	24.955**	27.023	10.921	36.210	14.255
Breusch-Godfrey statistic	1.585	1.265	0.413	0.412	1.900	1.262
Jarque-Bera statistic	2.202	1.602	2.904	2.947	1.065	1.913

The standard errors are HAC standard errors. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

When looking at the control variables, the results are mixed. The only control variable that shows a significant result is experience with mutual funds in the first two equations. As expected the effect of experience with mutual funds is positive. In the other equations, the coefficient for experience with mutual funds is also positive, but has lost significance. All the other coefficients for the control variables are not significant and some are even negative (where a positive sign was expected). For example, education and economic education. Both coefficients are negative in the first equation, positive for part 1 and negative again for part 2. This result is surprising. It would indicate that more (economic) education

leads to less accurate estimations for the more general mutual fund risks. Specific knowledge about mutual funds was expected to have a positive effect, but the coefficient is negative. This would mean that respondents who answered more questions regarding mutual funds right, did worse in the questions regarding the specific risks of the mutual fund. It could be that the knowledge questions were so general, that there simply is not any relation between this knowledge measure and actual knowledge on risks regarding a mutual fund. Lastly, the proxy for cognitive biases is which shows mixed results for the overall accuracy and between part 1 and part 2. So in some of the estimations more self-assessed understanding of the information, leads to less accurate answers.

The results for part 2 suffer from multicollinearity. The VIF values are high and sometimes even higher than 2.5. This is not very surprising, since the control variables used in this equation all lie very closely to each other, but it is surprising in the sense that it does not appear to be a problem in the estimations for part 1. This multicollinearity could be the reason why no significant results are found for our readability variable. With this dataset it is not possible to solve for this multicollinearity. Furthermore, important to note is that for none of the estimations, the F-test for joint significance shows a significant result. This means the null hypothesis of all the coefficients being equal to zero is not rejected. Considering also that all the R^2 values for the estimated equations are very low, the conclusion is that with this dataset, the KIID does not appear to have a positive or significant effect on the accuracy of the risk perception of investors.

6.2   Hypothesis 2: variance of the perceived risks

The variance of the perceived risks of the respondents is the main focus in the second hypothesis: increased readability of financial documents decreases the variance between the perceived and the actual risk. Before turning to the regression analysis, the means of the subsamples are tested on equality. The result is presented in Table 6.4. As expected the variance seems to be lower for the KIID than for the simplified prospectus, although the difference is not significant. For part 2, it appears that the variance for the simplified prospectus is lower than for the KIID, but this difference is also not significant.

The estimation of equation 10 is displayed in Table 6.5, column 1. As can be seen, the residuals of this estimation are not normally distributed, which causes the properties of the estimation to be flawed. In order to fix this problem, chosen is to log transform the dependent variable. The independent variables are not log transformed, due to their nature (see discussion before). The alternative estimation is presented in column 2. As can be seen form the Jarque-Bera statistic, the residuals are now normally distributed. The coefficient for readability is negative, as expected, but not significant. In this estimation, multicollinearity could be an issue. The VIF shows that for at least two variables, economic education and

daily experience with economics, multicollinearity is an issue. Also, the F-statistic shows the null hypothesis of no joint significance is not rejected. In order to solve for these problems, education and economic education are removed from the estimation. The results are presented in column 3. Education is removed from the estimation, because it is expected to be part of the multicollinearity issue.

When looking at the coefficients of estimation 3, the coefficient for the KIID and the coefficient for experience with mutual funds show the expected negative sign, as also expected from the previous found results. The other control variables show a positive sign, although they are not significant. The coefficient for the KIID is also not significantly different from zero. The F-test for joint significant does not reject the null hypothesis and estimation 3 is not expected to have a lot of explanatory power.

In a final attempt to establish an explanatory relation between the variance and the KIID daily experience with economics is replaced by economic education and self-assessed financial knowledge. Both show a negative sign, as expected. But, experience with mutual funds now lost significance. A possible explanation could be the high correlation between self-assessed financial literacy and experience with mutual funds (-0.629). Dropping either of the variables does not have any effect on the results and does not improve the joint significance of the independent variables.

Table 6.4 variance equality test

		All	KIID	SP	t-value[1]
Overall	Mean	1.000	0.956	1.047	0.481
	(st. dev.)	(0.921)	(0.908)	(0.941)	
Part 1	Mean	1.351	1.177	1.536	1.029
	(st. dev.)	(1.701)	(1.698)	(1.703)	
Part 2	Mean	0.649	0.735	0.558	-1.245
	(st. dev.)	(0.693)	(0.736)	(0.640)	

[1]$H_0: \mu_{KIID} = \mu_{SP}$, H_a $\mu_{KIID} \neq \mu_{SP}$. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

Table 6.5 Results variance

	V_i^*	Log(V_i^*)		
	1	2	3	4
c	0.817	0.400	0.496*	0.624**
KIID	-0.021	-0.017	-0.021	-0.017
Education	0.080	0.030		
Economic education	-0.029	-0.020		-0.018
Experience with mutual funds	-0.081	-0.037	-0.042*	-0.043
Daily experience with economics	-0.003	0.011	0.008	
Knowledge about mutual funds	0.066	0.034	0.031	0.036
Self-assessed financial literacy				-0.015
Understanding of presented information	-0.038	0.005	0.003	0.008
R^2	0.047	0.039	0.029	0.034
N	95	95	95	95
F-statistic	0.0618	0.504	0.539	0.515
White test statistic	39.178	45.612*	31.171**	33.715
Breusch-Godfrey statistic	0.485	0.800	1.129	0.810
Jarque-Bera statistic	45.028***	3.470	3.527	3.605

The standard errors are HAC standard errors. *Reject H_0 at a 10% significance level.
** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

6.2.1 Robustness check

In this section the results found below are tested for different subsamples. First for part 1 and part 2, these results are presented in Table 6.6 column 5-8. When first looking at the coefficient for the KIID, these are negative for part 1 and positive for part 2. So for the questions regarding the mutual fund specific risk, the KIID actually decreases the interval of the perceived risks, while for the more general mutual fund

risks, the KIID seems to increase the interval. Important to note, the coefficients are all nog significant, so the conclusions drawn should be read with a lot of caution.

The control variables all have the expected negative sign, except for knowledge about mutual funds, understanding of the presented information, and daily experience with mutual funds for part 2. Of the control variables, only experience with mutual funds seems to have a significant effect in estimation 3. The F-test of joint significance is not significant for each of the estimation and the R squared is very low. Also, the residuals are no longer normally distributed for these estimations. So in conclusion, the explanatory power of these estimations is therefore very low. This is similar to the results found previously.

The effect of the KIID on the variance is also tested for two other subsamples: the respondents who did relatively well in estimating their risks (V_i^* low) and the respondents who did relatively bad in estimating their risk (V_i^* high). The results are presented in column 9-11. For both groups the coefficient of the KIID shows a negative sign, although not being significant. When looking specifically at the estimation for the high subsample, this is the only estimation for which the F-test of joint significant is rejected. The R squared for this estimation is also much higher than for all the previous estimations. Not in line with the expectations are the positive signs for economic education and self-assessed financial literacy. The estimations appears to indicate that more economic education and self-perceived financial knowledge, increases the variance. The other control variables do show the expected sing in this estimation. Of all the variables, only the coefficient for understanding the presented information is significant in estimation 9.

When looking at the low subsample, the results are a bit different. The coefficient for the KIID is still negative and not significant, but the F-test cannot be rejected for these two estimations. Estimation 10 suffers from severe multicollinearity. This is probably due to the resampling, since this had not been a problem in the previous estimations. So even though the R squared is much higher than in other estimations (leaving estimation 9 out), the F-test cannot be rejected and estimation 10 lacks explanatory power. In order to solve the multicollinearity, all knowledge variables are taken out of the equation. The result is presented in estimation 11. Although there is no longer multicollinearity, this estimation also misses explanatory power. The F-test is not rejected and the R squared dropped drastically in comparison to estimation 10 (and 9).

When also taking into account the results presented in the previous paragraph on accuracy, it can be concluded that with this dataset the accuracy and the variance cannot be explained. There is a small

indication that the KIID indeed improves the perceived risks of investors when it comes to very specific risks of the presented mutual fund. But this result does not hold across all risks and subsamples.

Table 6.6 Robustness check variance

| | Dependent variable[1] | | | | | | |
| | V_i^* part 1 | | V_i^* part 2 | | V_i^* high | V_i^* low | |
	5	6	7	8	9	10	11
c	0.590*	0.820*	0.171	0.280	1.329***	0.188	0.196*
KIID	-0.114	-0.118	0.080	0.094	-0.042	-0.039	-0.026
Economic education		-0.035		0.004	0.016	-0.017	
Experience with mutual funds	-0.062*	-0.073*	-0.017	-0.012	-0.028	0.040***	0.026**
Daily experience with economics	-0.022		0.041				
Knowledge about mutual funds	0.063	0.063	0.004	0.014	-0.016	-0.005	
Self-assessed financial literacy		-0.034		-0.009	0.006	0.012	
Understanding of presented information					-0.064**	0.004	-0.003
Understanding of presented information (1)	0.006	0.008					
Understanding of presented information (2)			0.012	0.014			
R^2	0.056	0.064	0.046	0.027	0.241	0.141	0.098
N	95	95	95	95	50	45	45
F-statistic	1.063	1.005	0.862	0.412	2.272*	1.039	1.485
White test statistic	16.900	19.566	22.079	18.264	31.609	21.464	12.974
Breusch-Godfrey statistic	1.051	0.967	1.967	3.089	NA[2]	0.653	NA[2]
Jarque-Bera statistic	6.482**	7.186**	8.566**	8.085**	4.168	0.312	0.444

[1] The dependent variables are taken in logs. [2] inspection of the auxiliary regression indicates there is no serial correlation. The standard errors are HAC standard errors. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

6.3   Hypothesis 3: confidence and more information

The third hypothesis is one that has already been at the center of many other studies: when presented with more information, investors became more confident about the perceived risks. In the survey, the

respondents were presented with the information on the objectives and investment policy first, and then they were presented with the risks and past performance. After each of these sections, questions regarding risk and confidence were asked. When estimating equation 12, these two parts are used as two different time periods. Before estimating equation 12, the statistics of the two time periods are compared in Table 6.7 below. The table shows that when not controlling for individual characteristics, there does not appear to be a significant difference in confidence between the two parts.

Table 6.7 Confidence equality test

		All	Part 1	Part 2	t-value[1]
Overall	Mean	4.512	4.389	4.635	-1.447
	(st. dev.)	(1.173)	(1.201)	(1.137)	

[1]H_0: $\mu_{part\ 1} = \mu_{part\ 2}$, H_a $\mu_{part\ 1} \neq \mu_{part\ 2}$. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

As mentioned in paragraph 4.3, in the regression analysis, cross-section fixed effects are used. These effects account for time-invariant individual effects. Practically this means for each individual a dummy variable or an individual specific intercept is included in the regression. Furthermore, instead of using time fixed effects, a dummy corresponding with receiving additional information in period 2 is included. This gives the opportunity to analyze the significance and sign of the coefficient. Another way of estimating a treatment effect is by adding the lagged value of the dependent variable, or estimating the change of the dependent variable. When using this technique it is not possible to use individual fixed effects, due to the high correlation between the fixed effects and the lagged value of the independent variable. The model then loses a lot of explanatory power. Therefore, chosen is here to use the fixed effects model.

The results are presented in Table 6.8. To show the effect of the amount of information is comparable to period fixed effects, estimation 2 is added to the table. Here some additional F-statistics are presented to show the time fixed effects are not redundant, just as the amount of information has a significant effect on confidence. Going back to estimation 1, the coefficient for the amount of information is positive and significant. This means, more respondents became more confident when they were presented with more information (irrespectively of the type of information). In order to make sure all the possible appropriate factors were accounted for in this estimation, a test for omitted variables was performed. The omitted variables tested were whether the respondent had a positive feeling about the information and whether the respondent found the information useful. These two variables were chosen, because they are not immediately captured by the individual fixed effects, since they vary over time. The F-statistic (1.229)

shows that the null hypothesis should not be rejected, so the variables were not omitted from the estimation. Therefore, they are not included in the analysis.

Table 6.8 Results Confidence

	Dependent variable	
	C_{it}	
	1	2
c	4.389***	4.512***
Amount of information	0.246*	
R^2	0.688	0.688
F-statistic	2.185***	2.185***
Fixed effects cross-section F-statistic[1]	2.173***	2.173***
Fixed effects period F-statistic[1]		3.324*
Fixed effects joint F-statistic[1]		2.185***
Pesaran CD statistic[2]	-0.910	-0.910

[1] H_0: Fixed effects are redundant, H_a: Fixed effects are not redundant. [2] H_0: No cross-section dependence, H_a: Cross-section dependence. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

To determine whether the coefficients are biased, a dependence test is done. The Pesaran CD test-statistic is presented in Table 6.8. Chosen here is for the Pesaran CD test-statistic, because N (95) is relatively large in comparison to T (2). The more often used Breusch-Pagan LM statistic shows some shortcomings when N>T. The Pesaran CD statistic is more appropriate in these circumstances (De Hoyos & Sarafidis, 2006). The null hypothesis is not rejected, meaning there is no cross-sectional dependence in this model. This means, the coefficients are not biased due to correlation in the error terms between individuals.

In conclusion, the results above indicate that receiving more information indeed has a positive effect on confidence. This is consistent with the already existing literature as described in paragraph 2.4. So it appears the respondents in this survey also became more confident about the risks they perceived, when they were handed more information on the fund. A limitation here is that the questions regarding the

risks were not equal after each part of information. Therefore, it could be that the questions after one part were in general considered 'easier' and confidence therefore differed between the two periods.

6.3.1 Robustness check

One possible limitation of the results found before was already mentioned. This limitation is unfortunately not testable with the current dataset. In this paragraph two other methods are followed to check the robustness of the results before. First of all, the results are estimated again, this time using subsamples of the KIID and the simplified prospectus. As can be seen in Table 6.9 estimation 3 and 4, the positive and significant result holds for the subsample of the KIID. In the subsample of the simplified prospectus, the coefficient is also positive, but no longer significant. So it appears that the significance in the previous paragraph, was mainly due to the increased confidence of the subsample of the KIID. The additional information provided in the KIID showed more relevance to the confidence level, than the additional information given by the simplified prospectus.

The second robustness check is based on the study of Smith (2010). He examines the effect of more information on 'naïve' investor confidence and accuracy. He finds that more information leads to more confidence with naïve investors. Causing the conclusion that the current trend of handing naïve investors more information, might actually be harming these investors. To examine the difference between naïve investor confidence and not naïve investor confidence, the sample is divided based on the experience the respondents have with mutual funds. The results are presented in Table 6.9 estimation 5 and 6. The results show a similar result to the results found by Smith. More information, primarily affects the confidence level of less experienced investors. The coefficient for more information for experienced investors even became negative and insignificant in this subsample.

In conclusion, handing the investor more information leads to increased investor confidence in general. When checking the robustness of this result, this effect appears to be mainly relevant for the less experienced investors and the investors who received the more readable information. These results are consistent with the existing literature on this topic. Only the possible effect of readability on this confidence level is new, but would need more research to really indicate the effect and the consequences.

Table 6.9 Results robustness checks

	Dependent variable		Dependent variable	
	C_{it} KIID	C_{it} SP	C_{it} naïve	C_{it} not naïve
	3	4	5	6
c	4.211***	4.580***	4.177***	4.828***
Amount of information	0.408*	0.017	0.385**	-0.043
R^2	0.688	0.697	0.648	0.772
F-statistic	2.162***	2.250***	1.816***	3.272***
Fixed effects cross-section F-statistic[1]	2.130***	2.296***	1.767**	3.380***
Pesaran CD statistic[2]	-0.495	0.396	-0.441	-0.984

C_{it} is taken in logs. [1] H₀: Fixed effects are redundant, Hₐ: Fixed effects are not redundant. [2] H₀: No cross-section dependence, Hₐ: Cross-section dependence. *Reject H₀ at a 10% significance level. ** Reject H₀ at a 5% significance level. *** Reject H₀ at a 1% significance level.

6.4 Hypothesis 4: confidence and readability

The last hypothesis is directly related to the main question of this thesis: increased readability leads to more confidence of investors about the perceived risks. Before testing equation 14, a simple t-test is performed to test for differences between the confidence levels of the two subsamples. The results are presented in Table 6.10. At first sight, there does not appear to be a significant difference in the confidence of the respondents who were presented with the KIID and the respondents presented with the simplified prospectus.

In order to allow for effects of control variables, equation 14 is estimated to estimate the effect of the KIID on respondent confidence. The results are presented in column 1 of Table 6.11. As can be seen in the first column, the coefficient for readability is negative for all specifications. This implies that increased readability, decreases confidence. This is not the effect that was expected, since the expectation was that more readability leads to more confidence. Furthermore, the coefficient for readability does not appear to be significant in neither of the specifications.

Table 6.10 Confidence equality tests

		All	KIID	SP	t-value[1]
Overall	Mean (st. dev.)	4.512 (0.968)	4.415 (1.088)	4.616 (0.819)	1.012
Part 1	Mean (st. dev.)	4.389 (1.201)	4.211 (1.367)	4.580 (0.972)	1.507
Part 2	Mean (st. dev.)	4.635 (1.137)	4.619 (1.269)	4.652 (0.991)	0.141

[1]H_0: $\mu_{KIID} = \mu_{SP}$, H_a $\mu_{KIID} \neq \mu_{SP}$. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

Of the control variables, only experience with mutual funds and economic education appear to have a significant effect. When checking the correlation table, it appears economic education is highly correlated with daily experience with economics and experience with the presented information. Also, experience with mutual funds is highly correlated with experience with the presented information. When deleting these control variable from the estimation, the signs of the coefficients of the other variables do not change (column 2). Of the control variables, all coefficients show the expected positive and significant effect, except for experience with mutual funds. The coefficient for experience with mutual funds is negative and significant, so more experience with mutual funds makes respondents less confident about their risk perception. This could be due to the general uncertainty involved with investing in a mutual fund. A more experienced investor could be more aware of this uncertainty and translate it into his own uncertainty. Overall the effect of the sense of expertise is positive (experience with mutual funds and economic background). This was the same effect as described by Garcia (2013). When looking at the other variable defining confidence, the effect of age is positive and significant as expected. So with age comes confidence. This is a similar effect as observed with the self-assessment of financial knowledge. With age, people tend to have a more positive perception of their financial knowledge (justly, or unjustly) (Lusardi & Mitchell, 2014).

Table 6.11 Results confidence

	Dependent variable				
	C_i				
	1	2	3	4	5
c	3.034***	3.332***	1.835***	2.487***	1.909***
KIID	-0.269	-0.232	-0.106	-0.225	-0.087
Experience with mutual funds	-0.139**	-0.074	-0.094	-0.075	-0.097*
Economic education	0.146***	0.203***	0.155***	0.161***	0.164***
Daily experience with economics	0.095				
Experience with the presented information	0.096				
Age	0.018	0.018*	0.027***	0.024**	0.026***
Useful			0.072	0.211	
Positive feeling			0.313***		0.368***
R^2	0.165	0.131	0.255	0.198	0.249
N	95	95	95	95	95
F-statistic	2.895**	3.399**	5.008***	4.406***	5.916***
White test statistic	29.550	12.931	24.761	25.098	16.067
Breusch-Godfrey statistic	1.609	1.709	3.094	1.895	3.165
Jarque-Bera statistic	0.715	0.673	0.617	0.552	0.304

The standard errors are HAC standard errors. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

6.4.1 Robustness check

In order to check for the robustness of the results presented above, some other control variables for the characteristics defining confidence were added to the original model. The results can be found in column 3-5 of Table 6.11. The first thing that stands out, is that the explanatory power of the models increase relatively to the original two models, but the KIID remains insignificant. The signs of the control variables do not change. The added variable having a positive feeling about the presented information is found to be positive and significant. Finding the information useful on the other hand does not have a significant effect on confidence. A possible reason for this insignificant result is the high correlation between the

added variables. Therefore, both are estimated again, but this time only one of the two is added. Column 4 shows the results of the estimation with only finding the information useful. The coefficient remain insignificant. When only adding the coefficient for having a positive feeling, the result remains significant and positive. So it seems finding the information useful does not have an effect on confidence.

Another robustness check is done by splitting the total effect up in part 1 and part 2. The results can be found in Table 6.12 column 6-9. For each part estimation 2 and 3 are done again. The signs of the coefficients of the control variables have not changed in these estimations, but some coefficients lost significance. Most importantly, the coefficient for the KIID is found to be significant, but negative for part 1. So it seems for the very mutual fund specific risks, readability of the information decreased confidence of respondents. For part 2, estimation 8 does not reject the null hypothesis for joint significance and in estimation 9, the coefficient for the KIID shows a small but positive effect, although not being significant. A possible explanation can be the high correlation between having a positive feeling and finding the information useful. When deleting finding the information useful from the model, the coefficient for the KIID is negative again, although not being significant (column 10). So it cannot be said for part 2 that readability has an effect on confidence, while for part 1, readability appears to have a negative and significant effect.

In the last check, the sample is divided into respondents who are have experience with mutual funds and respondents who had little or no experience with mutual funds. The result can be found in Table 6.12 column 11 and 12. In these estimations, the control variables experience with mutual funds is removed. Also economic education is removed from the estimation, while age and having a positive feeling are retained. Since the subsamples are already sampled on the 'sense of expertise', some of the control variables, such as economic education, lost explanatory power. In order to specifically control for the sense of expertise and other factors which are not related to experience or background, the equations as presented in the table are chosen. The results show that the coefficient KIID is significant and negative for the experienced subsample. Remarkably to see is the value of the coefficient, this is much larger than in the previous estimations. Note that the F-test for joint significant is not rejected. For the inexperienced subsample, the coefficient for the KIID is positive, but not significant. The control variables did not change sings in either of these equations. In conclusion, the insignificant results found in the original model are probably due to the insignificant effects in part 2 and for inexperienced investors. This is further discussed in the next chapter.

Table 6.12 Confidence robustness

	Dependent variable						
	C_i part 1		C_i part 2			C_i exp[1]	C_i n-exp[2]
	6	7	8	9	10	11	12
c	3.090***	2.532***	3.575***	2.492***	2.588***	2.691**	2.358***
KIID	-0.408*	-0.402*	-0.057	0.004	-0.034	-0.867*	0.093
Experience with mutual funds	-0.070	-0.071	-0.077	-0.088	-0.078		
Economic education	0.220***	0.191**	0.187**	0.146**	0.147**		
age	0.022	0.027**	0.014	0.020*	0.020*	0.038*	0.011
Useful		0.108		0.187**	0.230***	0.324**	0.473***
Positive feeling		0.038		0.078			
R^2	0.121	0.139	0.070	0.157	0.152	0.219	0.231
N	95	95	95	95	95	25	70
F-statistic	3.104**	2.370**	1.697	2.731**	3.200**	1.964	6.607***
White test statistic	17.539	30.485	13.621	29.767	25.184	9.676	7.798
Breusch-Godfrey stat.	1.077	0.694	1.727	2.031	1.848	2.109	1.590
Jarque-Bera statistic	4.561	3.878	1.010	2.262	1.734	1.021	0.255

The standard errors are HAC standard errors. [1]Exp = respondent had some to a lot of experience with mutual funds, [2]n-exp = respondent has little experience with mutual funds. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

6.4.2 Extension

As many of the previous studies literature is concerned with overconfidence, not so much of confidence itself, a short analysis is done here to see if anything can be said about the degree of confidence found in this dataset. First of all, the means of the confidence levels of respondents with a high variance in accuracy and respondents with a low variance in accuracy are compared. The results are presented in Table 6.13 and are somewhat surprising. It seems that respondents with who had a high variance in their estimation of risks, have a higher level of confidence. The difference between the two groups is significant when tested with a t-test. The distribution of the confidence level to the level of variance is added in Appendix XII. It seems the confidence level of respondents with a high variance is somewhat smoothed out over the values 3.5 to 6.5, while the confidence level of respondents with low variance is mostly concentrated

around 4.5 (4 meaning, not certain/not uncertain). So it appears the respondents who were the least accurate had larger confidence in their answers.

When subdividing these results to the KIID, the result remains. For the KIID the difference between the confidence level is significant, with the respondents with high variance having more confidence. The same goes for the simplified prospectus, although this difference is not significant. This is a concerning result, because it suggests that the KIID causes investors who are less accurate become more confident about their risk perception.

Table 6.13 Confidence extension equality tests

		All	High	Low	t-value[1]
Overall	Mean	4.512	4.763	4.233	-2.578***
	(st. dev.)	(0.968)	(1.063)	(0.768)	
	N	95	50	45	
KIID	Mean	4.415	4.769	4.014	-2.559**
	(st. dev.)	(1.088)	(1.187)	(0.816)	
	N	49	26	23	
SP	Mean	4.616	4.757	4.462	-1.226
	(st. dev.)	(0.819)	(0.936)	(0.657)	
	N	46	24	22	

[1]H_0: $\mu_{KIID} = \mu_{SP}$, H_a $\mu_{KIID} \neq \mu_{SP}$. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

In order to control for possible individual effect, estimations 11 and 12 are done again for the two subsamples of respondents having low and high variances. The results are presented in Table 6.14. The coefficient for the KIID is negative for both subsamples, so the KIID is decreasing confidence for both subsamples. But, only the coefficient in equation 14 (for the subsample with low variance) is significant. When looking at the results above, this is not surprising, especially for the significant result in the low variance subsample. The difference between the mean of the KIID and the mean of the simplified prospectus differs quite a bit for the low variance subsample, with the mean of the KIID being lower. For the high subsample, the difference is minimal. Therefore, the not significant result found in estimation 13 is not surprising. The means for confidence of the subsamples of the KIID and the simplified prospectus just do not differ that much. In conclusion, for investors with a low variance of accuracy (so high accuracy), increased readability appears to decrease confidence. For investors with high variance, such an effect does not appear to be present. The results found in Table 6.13 are a source of concern and are further discussed in the next chapter.

Table 6.14 Results confidence extension

	Dependent variable	
	C_i (high V_i^*)	C_i (low V_i^*)
	13	14
c	3.066***	3.016***
KIID	-0.102	-0.365*
age	0.021	0.017*
Useful	0.273**	0.220**
R^2	0.123	0.216
N	50	45
F-statistic	2.155	3.757**
White test statistic	19.890***	6.927
Breusch-Godfrey statistic	1.681	1.943
Jarque-Bera statistic	0.457	0.079

*Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

7   Discussion

The results found in this thesis are mixed when it comes to the influence of readability on accuracy and confidence. The analysis does indicate that readability has an effect on perceived risks. This is similar to the result found by Weber and Milliman (1997), who found that different presentation of an equal risk, had an impact on the perceived risk of respondents. Whether or not this perceived risk is more accurate, does not clearly stem from the data. There is a small indication that it might, but this would need further research. These mixed results on accuracy do not find support in the literature. Because the expectation was that readability also has an indirect effect through amount of information, the expected effect was that increased readability would lead to higher accuracy. The literature on confidence mostly also take accuracy into account, and generally find that more information has a positive effect on accuracy, although it has an even more positive effect on confidence (which could possibly lead to overconfidence) (see for example Oskamp, 1965; Tsai et al., 2008).

Even though no significant effect is found, the result remains interesting. So it seems the introduction of the KIID, with its increased readability, did not enable investors to better estimate their risks. The goal of the KIID is therefore not achieved, even though the means through which the EU tried to reach this goal, increased readability, seems to have worked out. So the KIID is actually better readable than the simplified prospectus, but investors did not necessarily become more accurate.

When using the current data to test the hypothesis of *more* information leading to more confidence, supportive results were found. These results are in line with the literature on confidence and information (for exmaple Oskamp, 1965). When directly regressing readability on confidence, so conclusive results were found. So there is a strong indication, that readability does not have an effect through increasing the amount of information presented. A possible explanation could be that the respondents were not handed so much information at once, so they would not be overwhelmed by the amount or be put off by the difficulty.

The effect of readability on confidence is not clear cut, but there is an indication that readability indeed has an influence on confidence. Surprisingly, this effect is negative. So more readable information leads to less confidence of investors about their perceived risks. The negative effect is surprising when considering that a more readable document is supposed to lead to more informed investors. A more informed person is thought to be more confident as well. A possible explanation could be that more informed investors are more aware of the uncertainty of investing in a mutual fund. This uncertainty might also translate into uncertainty in their own risk perceptions.

Probably most surprising was the result found in the extension of hypothesis 4, on the relation between accuracy and confidence. It seemed that investors who estimated their risk the least accurate of the sample, were more confident about their perceived risks. And this effect seemed especially true for the subsample who received the KIID. The confidence levels of respondents who are most accurate, are similar across the two subsamples (KIID and simplified prospectus). On the contrary, the confidence levels of the least accurate respondents are very different across the two subsamples. The least accurate are the most confident when presented with the KIID. It appears the KIID does the more naïve investor a favor, by presenting the information in an easy manner. But this does not take away that the information is still about a very difficult subject. The information might make the naïve investor think he understands it all, and therefore: confidence increases. It seems this has a lot in common with the illusion of knowledge, and the investor is not very well from himself protected by this document (see for example Loonen, 2015).

These results are interesting for the further development of the KIID and other related documents. For as far as the effect of readability on accuracy is tested here, there does not appear to be an effect of the readability of the document on the accuracy of the perceived risks of respondents. It could be that these results are biased by the mainly higher educated respondents of the survey, but the result remains surprising. A more readable document could make it easier for investors to read the information, but not necessarily enable them to make more informed decisions. Furthermore, interesting is that a more readable document seems do decrease investor confidence. Since confidence is considered the 'oil' between the perceived risk and the investment decision, this could actually lead to an adverse effect. For a preliminary analysis on the effect of confidence on the investment decision, see Appendix XIII.

Coming back to the possibility of a biased sample. The mainly higher educated respondents of the sample, are probably the main target group of mutual funds, when targeting individual investors. These are the people who are generally able to understand the information and are not overwhelmed by the difficulty. See also the short note in paragraph 5.2.1 on this matter.

7.1 Policy implications

The motivation of this thesis was the introduction of the KIID and the critique on the increased regulation of the financial markets, through for example disclosure duties. From the results it seems, the KIID does not reach its goal of enabling investors to make better informed decisions. There is even an indication that the KIID only makes naïve investors more certain about their wrongly perceived risks. In order to make the KIID reach its goals, further research is needed to the underlying reasons for the effects found in this thesis. Also, making mutual fund advisors aware of the results found in this thesis, could help them

steer the investor in the right direction. Lastly, from this thesis is appears the KIID is not the 'golden ticket'. Anyone can read the KIID, but not everyone can understand the KIID. More readability is not always the answer, if the reader does not understand the main principles of the topic of the document. This is very important for policy makers to keep in mind. Just making a document more readable, does not fix the problem of uninformed investors.

7.2   Limitations

The results found in this thesis are very preliminary. More research would be needed to draw further conclusions. Some of the limitations of this study are the origin of the data, the nature of the data, and the construction of dependent variables. To start with the origin of the data. The data used in this study is collected via a survey. This survey is conducted through an online tool. This means, the author is not present when a respondent fills out the survey. So, it could be that respondents did not focus on the survey as well as is assumed. Furthermore, the respondents might not necessarily be interested in investing in mutual funds, making them not part of the population of (potential) investors.

Secondly, the nature of the data. Many of the control variables used in this study are controls for which the respondent had to indicate to what extent something was applicable to him. For example, to what extent economics is part of the daily activities of a respondent. The answer given by the respondent is very arbitrary. Respondents with equal economic knowledge, could indicate their knowledge differently on the 7 point Likert scale. This could cause a measurement error in the control variables. The same is true for the dependent variables, since they are also indicated on a 7 point Likert scale. It could be that two respondents with equal confidence, indicate their confidence level differently, because they interpret the scale, or their confidence differently.

The last limitation is the construction of the dependent variables. The most strikingly is the determination of accuracy. As mentioned in the theoretical framework, the actual risk is unobserved and the risk perceived by investors is influenced by the translation of the mutual fund and the interpretation of the investor. The same is true for the author. Although the author had more information than the respondents, it is nearly impossible to truly capture the risk in the 7 point Likert scale. It could therefore be that the interpretation of the author is not correct and the dependent variables are constructed upon an assumption that is not correct.

7.3   Future research

A further review of the KIID document is recommended in order to have a more broad analysis on how the risks are perceived by the (potential) investors and what the consequences are of these findings. In

this study, only the risks regarding the spread of risk and the risk on return were taken into account. The risks involved in a mutual fund are much broader than just these two risks. It would be useful to also test the document on the display of these risk and how they are perceived by the investors. This research would be even more useful if it could be done in practice with people who are interested in investing in mutual funds. This way the motivation for reading the information is more genuine than as in the current study in the survey. It would be of added value of not only investors in mutual funds, but also investors who decided not to invest in a fund could be included in the sample.

On the topic of readability of financial documents, it would be very interesting to take this research further. There is not much literature available yet on the effects or readability on individual investor behavior and decision making. More elaborate studies, with field research and more respondents, could give more results and insights in the world of the individual investor and the trend of 'plain English'. Although presenting information in such a way so everyone can understand seems pretty straight forward, but the effect might actually turn out differently.

8   Conclusion

In this thesis, the main question is: Does readability of financial documents influence the (accuracy of) perceived risks and the confidence of (potential) investors? This question was answered using four hypothesis on the effect of readability on accuracy, variance of accuracy, and confidence, and the effect of more information on confidence. From these hypothesis is does not clearly follow what the effect of readability is. Readability does appear to have some sort of effect on the perceived risk of investors, but whether or not this also leads to more accuracy remains uncertain. The results do indicate that there is a relation between readability and confidence. Surprisingly, the effect found is negative. So more readable documents leads to less confident investors. But, when testing this hypothesis on robustness, the results appear not to be very robust. Further research would be necessary to draw conclusions on this hypothesis.

The results found above are nevertheless interesting. The goal of the KIID was to protect investors, through enabling to make better informed decisions. So it seems, the increased readability of the KIID does not have an effect on accuracy of investors. So the question is, whether they are actually better able to make decisions. Furthermore, the KIID appears to make investors less confident on their perceived risks. It is expected that confidence is an important component of the decision making process.

In conclusion, the current wave of increased regulatory pressure and further investor protection rules, through for example for readable information documents, should critically be evaluated. The firm believe that more and more readable information, will benefit the investor appears not to be so strong when empirically tested. When implementing protective measures, governments should be aware of all the effects the information has on the behavior of an investor. Only then, the measures will truly protect the investors.

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9.2 Regulation

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Commission Recommendation 2004/384/EC of 27 April 2004 on some contents of the simplified

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prospectus as provided for in Schedule C of Annex I to Council Directive 85/611/EEC ('Commission

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Directive 2014/91/EU of the European Parliament and of the Council on 23 July 2014 amending Directive

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undertakings for collective investment in transferable securities (UCITS) as regards depositary

functions, remuneration policies and sanctions ('UCITS V').

Appendix

I.   Optimal range

Table I

#	Question	Range
Q6.1	To what extent is your risk in this fund spread over different regions?	3-5
Q6.2	To what extent will you profit from market growth in the EU?	4-6
Q6.3	To what extent does an investment in this fund respond to any widespread financial turmoil?	5-7
Q8.1	How large is the chance that your return will be lower, or you will suffer a loss with this fund?	2-4
Q8.2	How certain are you of a positive return in five years?	2-4
Q8.3	How high is the volatility of the return of this fund?	3-5

Q6.1

This question is regarding the spread of the risk across regions. For this fund, the spread looks as follows:

Top 5 regions	%
United states	56.56
Western Europe – Euro	24.51
United Kingdom	5.93
Western Europe – Non-Euro	5.09
Asia - Developed	3.16

Source: Morningstar.nl

The risk is somewhat spread across regions, but with a main focus on the US and the Eurozone. Since the risk is somewhat spread, the optimal range would have been somewhere around the middle, so between 3-5.

Q6.2

This question is regarding the focus of the fund on the EU. As seen in the previous question, about 25% of the fund is invested in the EU. This indicates that the fund can to quite some extent profit from market

growth in the EU. But considering the percentage invested in bonds, the profit from market growth will not be as large, as when all the capital was invested in stocks. Therefore, not 5-7, but 4-6 is the optimal range for this question.

Position	% Long	% Short	% Net
Stock	31.63	1.13	30.50
Bonds	61.75	7.11	54.64
Cash/money market	25.45	13.83	11.62
Other	3.35	0.11	3.24

Source: Morningstar.nl

Q6.3

This is regarding the sensitivity of this fund to widespread financial turmoil. The graph below shows the historic results of the fund in comparison to a benchmark and the Morningstar category EUR Defensive. As can be seen, in 2010 the fund did not grow very fast, like it did after 2012. This could indicate that the fund is sensitive to widespread financial turmoil, like the one from 2008/09. Therefore, the optimal range here is 5-7.

Growth

Insinger de Beaufort MM Def Balanced : 12,685.00

Cat 75%Barclays EurAgg TR&25... : 15,386.94   Mixfondsen EUR Defensief - Werel... : 11,960.87

Source: Morningstar.nl

Q8.1

This question is regarding the growth of the fund. Since it is a mutual fund, and it is dependent upon uncertain events happening in the world, it is very hard to predict the return on this fund. Chances that

returns will be lower than expected are always present, 1 is therefore not within the optimal range. Depending on the holding period, the chances are not very high that return will be lower than expected. As also presented by Morningstar[27], the return on this fund is above average for his category. The chance is seen as low, but not extremely low, the optimal range would then be 2-4.

Q8.2

This question sounds like the previous one, but is not entirely the same. The question here is about a positive return in five years. Although the fund has shown quite some growth over de last five years, in the beginning period, this growth was virtually absent. Also, the fund is still dependent upon uncertain events in the world. Another difference with the previous question is the manner in which it is asked. The previous question asked for a chance, while this question asks for certainty. Since there is a lot of uncertainty in the world, the optimal range is 2-4.

Q8.3

The last question is regarding the volatility of this fund. The risk indicator in the KIID is based on the volatility of the fund. For this fund, the risk indicator is a 3. Meaning the volatility of this fund, compared to other funds on a scale from 1 to 7, is a 3. But since this question does not define to what the fund's volatility should be compared, assumed is volatility in general. In that case, the volatility is quite high. Therefore, the optimal range is 3-5.

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[27] http://www.morningstar.nl/nl/funds/snapshot/snapshot.aspx?id=F00000J50L&tab=2 (07-09-2016).

II.   Risk range

Table II

#	Question	Original	Transformed	Optimal range
Q6.1	To what extent is your risk in this fund spread over different regions?	High: 1 Low: 7	High: 7 Low: 1	3-5
Q6.2	To what extent will you profit from market growth in the EU?	High: 7 Low: 1	High: 7 Low: 1	4-6
Q6.3	To what extent does an investment in this fund respond to any widespread financial turmoil?	High: 7 Low: 1	High: 7 Low: 1	5-7
Q8.1	How large is the chance that your return will be lower, or you will suffer a loss with this fund?	High: 7 Low: 1	High: 7 Low: 1	2-4
Q8.2	How certain are you of a positive return in five years?	High: 1 Low: 7	High: 7 Low: 1	4-6
Q8.3	How high is the volatility of the return of this fund?	High: 7 Low: 1	High: 7 Low: 1	3-5

Q6.1-3

These questions are about the spread of risks. The first and third question are straightforward about this. If risk is spread across more regions and if the fund responds to a lesser extent to financial turmoil, the perceived risk is lower. The second question is about the home bias. The home bias means that investors invest a relatively large amount in domestic equities, while for the spread of risk, it would make more sense to diversify to other regions and sectors[28]. Since most respondents were Dutch or EU citizens, to a large extent profiting from EU market growth, means taking relatively more risk.

Q8.1-3

These questions are about the risk of return. Whenever the investor indicates that chances of losing money, or receiving less than you anticipated is bigger, the investor perceives more risk. The same goes for volatility, whenever the investor perceives this as high, the perceived risk is higher.

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[28] http://www.investopedia.com/terms/h/homebias.asp (8 September 2016).

III.   Survey

Q0 Thank you for helping me graduate by participating in this survey. It will take approximately 20 minutes to complete the full survey. Please indicate your preferred language below:

○ English (1)
○ Nederlands (2)

Q1 Please answer the questions below.

	Far below average (1)	Moderately below average (2)	Slightly below average (3)	Average (4)	Slightly above average (5)	Moderately above average (6)	Far above average (7)
How would you assess your understanding of economics? (1)	○	○	○	○	○	○	○
How would you rate your willingness to take financial risks? (2)	○	○	○	○	○	○	○

Q2 Please answer the questions below. 1 means none at all, 7 means a great deal.

	1	2	3	4	5	6	7
How much of your education was devoted to economics? (1)	○	○	○	○	○	○	○
How much of an understanding of economics do you need during you daily activities (job, hobbies, etc.)? (2)	○	○	○	○	○	○	○
Do you have experience with mutual funds? (investing, advising, etc.) (3)	○	○	○	○	○	○	○

Q3 Please imagine the following situation: you can choose between a sure payment and a random draw. The random draw gives you a 50% chance of receiving 300 Euro. With an equally high chance you receive nothing. Now imagine you had to choose between the random draw and a sure payment. I will present to you five different situations. The random draw is the same in all situations. The sure payment is different in every situation.

RS1 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 160 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 160 Euro as a sure pay... Sure payment Is Selected

RS2 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 80 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 80 Euro as a sure paym... Sure payment Is Selected

RS3 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 40 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 40 Euro as a sure paym... Random draw Is Selected

RS4 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 60 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 60 Euro as a sure paym... Random draw Is Selected

RS5 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 70 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 5... Sure payment Is Selected

RS6 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 50 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 5... Sure payment Is Selected

RS7 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 20 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 20 Euro as a sure paym... Random draw Is Selected

RS8 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 30 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 20 Euro as a sure paym... Sure payment Is Selected

RS9 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 10 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 5... Random draw Is Selected

RS10 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 120 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 120 Euro as a sure pay... Sure payment Is Selected

RS11 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 100 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 100 Euro as a sure pay... Sure payment Is Selected

RS12 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 90 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 100 Euro as a sure pay... Random draw Is Selected

RS13 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 110 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 120 Euro as a sure pay... Random draw Is Selected

RS14 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 140 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 140 Euro as a sure pay... Random draw Is Selected

RS15 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 150 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 140 Euro as a sure pay... Sure payment Is Selected

RS16 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 130 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS17 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 240 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS18 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 200 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS19 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 180 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS20 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 190 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 180 Euro as a sure pay... Sure payment Is Selected

RS21 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 170 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 200 Euro as a sure pay... Random draw Is Selected

RS22 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 220 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 220 Euro as a sure pay... Random draw Is Selected

RS23 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 230 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 220 Euro as a sure pay... Sure payment Is Selected

RS24 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 210 Euro as a sure payment?

○   Random draw (1)
○   Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 240 Euro as a sure pay... Random draw Is Selected

RS25 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 280 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 280 Euro as a sure pay... Sure payment Is Selected

RS26 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 260 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 260 Euro as a sure pay... Random draw Is Selected

RS27 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 270 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 260 Euro as a sure pay... Sure payment Is Selected

RS28 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 250 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS29 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 300 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS30 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 290 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

RS31 What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 310 Euro as a sure payment?

○ Random draw (1)
○ Sure payment (2)

Q4 Please answer the questions below, without the use of external sources or the help of a calculator.

1 Suppose you had € 100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

○ More than € 102 (1)
○ Exactly € 102 (2)
○ Less than € 102 (3)
○ Do not know (4)

2 Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

○ More than today (1)
○ Exactly the same as today (2)
○ Less than today (3)
○ Do not know (4)

3 Suppose that in the year 2020, your income has doubled and prices of all goods have doubled too. In 2020, how much will you be able to buy with your income?

○ More than today (1)
○ Exactly the same as today (2)
○ Less than today (3)
○ Do not know (4)

4 Which of the following statements describes the main function of the stock market?

○ The stock market helps to predict stock earnings (1)
○ The stock market results in an increase in the price of stocks (2)
○ The stock market brings people who want to buy stocks together with those who want to sell stocks (3)
○ None of the above (4)
○ Do not know (5)

5 Which of the following statements is correct? If somebody buys the stock of firm B:

○ He owns a part of firm B (1)
○ He has lent money to firm B (2)
○ He is liable for firm B's debts (3)
○ None of the above (4)
○ Do not know (5)

6 Which of the following statements is correct?

○ Once one invests in a mutual fund, one cannot withdraw the money in the first year (1)
○ Mutual funds can invest in several assets, for example invest in both stocks and bonds (2)
○ Mutual funds pay a guaranteed rate of return which depends on their past performance (3)
○ None of the above (4)
○ Do not know (5)

7 Normally, which asset displays the highest fluctuations over time?

○ Savings account (1)
○ Bonds (2)
○ Company stocks (3)
○ Mutual fund stocks (4)
○ Do not know (5)

8 When an investor spreads his money among different assets, the risk of losing money

○ Increases (1)
○ Decreases (2)
○ Stays the same (3)
○ Do not know (4)

9 Stocks are normally riskier than bonds. True or false?

○ True (1)
○ False (2)
○ Do not know (3)

10 Buying a company stock usually provides a safer return than a stock mutual fund. True or false?

○ True (1)
○ False (2)
○ Do not know (3)

11 Please indicate how difficult you found the previous questions.

○ Extremely easy (1)
○ Moderately easy (2)
○ Slightly easy (3)
○ Neither easy nor difficult (4)
○ Slightly difficult (5)
○ Moderately difficult (6)
○ Extremely difficult (7)

Intro You will now be asked twice to read some information and answer a few questions. Please read the information carefully before answering the questions.

Key investor information

Fund B

This document offers you key investor information about this fund. It is not marketing material. The information is required by law to help you understand the nature and the risks of investing in this fund. You are advised to read it so you can make an informed decision about whether to invest.

Objectives and investment policy

The aim of Fund B (hereinafter: the 'Fund') is to deliver medium-term growth through capital appreciation with a moderate level of portfolio risk.

The Fund invests its assets in fixed income, equities, alternative investments and cash instruments. Active asset allocation may be applied to adapt the portfolio to changing market conditions. The Fund diversifies its assets across specialized portfolio managers who can add value in terms of risk and return in their fields of expertise. In addition the Fund seeks an effective allocation between actively and passively managed funds. Additionally the Fund may invest in funds of which Investment Firm is the (portfolio) manager.

The performance of the Fund will depend primarily on the performance of the investment institutions that have been selected, and the performance of the financial markets in general.

The Fund does not apply a benchmark. Although the Fund strives to achieve capital growth every year, the possibility of negative returns cannot be ruled out.

The value of the shares in the Fund is determined on a daily basis. This intrinsic value is published every business day on the portfolio manager's website.

The shares in the Fund are listed on Country X Stock Exchange. It is possible to exit the Fund on any business day by selling the shares to the Fund, except on national holidays in Country X.

The Fund reinvests any profits earned and does not plan to distribute dividends.

Q5 Please indicate if you agree with the following statements. 1 means strongly disagree, 7 means strongly agree.

	1	2	3	4	5	6	7
I find the presented information easy to understand (1)	○	○	○	○	○	○	○
When reading this text, I get a positive feeling about the fund (2)	○	○	○	○	○	○	○
I find the presented information useful (3)	○	○	○	○	○	○	○

Q6 Imagine you invested in this fund. Please answer the questions below and indicate in the right-hand column how certain you are of your answer.

	1 means very small extent, 7 means very large extent							1 means very uncertain, 7 means very certain						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
To what extent is your risk in this fund spread over different regions? (1)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
To what extent will you profit from market growth in the EU? (2)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
To what extent does an investment in this fund respond to any widespread financial turmoil? (3)	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Q66 Please read the information below carefully before answering the questions.

Risk/Reward profile

Lower risk - typically lower yield				Higher risk - typically higher yield		
1	2	3	4	5	6	7
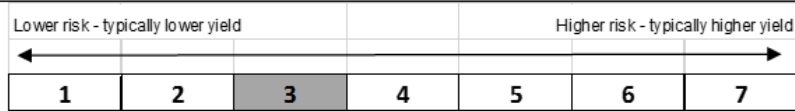
The historical data, such as used in calculating the risk category shown above, are not a reliable reflection of the future risk/reward profile.

There is no guarantee that the risk category shown will remain unchanged. The risk category may change over time.

The lowest category does not imply that the investment is without risk.

It is possible that your investment will increase in value, but it is also possible that your investment will provide little or no return and that you will lose all or some of your invested capital in the event of adverse price movements. No guarantees can be given that the Fund's investment objectives will be achieved.

The Fund's risk profile is a reflection of risk profiles for the various equity funds, bond funds, hedge funds and other investment institutions in which the Fund invests. The starting point is that this reflection entails a balanced defensive risk profile.

The materially relevant risks of the Fund which are not adequately reflected in the indicator:

Depositary risk: loss can arise from assets held in custody as a result of insolvency, negligence or fraudulent acts of the depositary or of a subdepositary.

Past performance

	2010	2011	2012	2013	2014	2015
Performance	3%	-3%	7%	6%	8%	2%
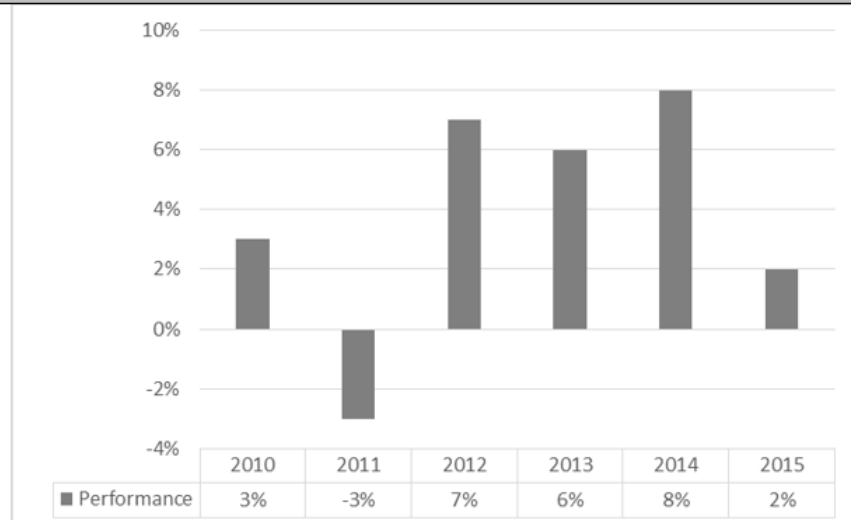
The past performance is not a guarantee for future results.

The ongoing charges and transaction costs of the Fund are included in the calculation of the past performance. In calculating the past performance, entry/exit charges have not been taken into account.

In the chart only the performance as from launch date of the Fund on 30 June 2010 is shown.

The past performance has been calculated in EUR.

Q7 Please indicate to what extent you agree with the following statements. 1 means strongly disagree, 7 means strongly agree.

	1	2	3	4	5	6	7
I find the presented information easy to understand (1)	❍	❍	❍	❍	❍	❍	❍
When reading this text, I get a positive feeling about the fund (2)	❍	❍	❍	❍	❍	❍	❍
I find the presented information useful (3)	❍	❍	❍	❍	❍	❍	❍

Q8 Imagine you invested in this fund. Please answer the questions below and indicate in the right-hand column how certain you are of your answer.

	1 means very small/uncertain/low, 7 means very large/certain/high							1 means very uncertain, 7 means very certain						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
How large is the chance that your return will be lower, or you will suffer a loss with this fund? (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
How certain are you of a positive return in five years? (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
How high is the volatility* of the return of this fund? (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

expl. * 'volatility is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index.' (source: Investopedia)

Intro You will now be asked twice to read some information and answer a few questions. Please read the information carefully before answering the questions.

Fund B

Objectives and investment policy

The investment objective of Fund B (hereinafter: the 'Fund') is to achieve long term capital appreciation and growth consistent with a defensive balanced profile. The Fund will attempt to achieve this by outperforming the average performance of fund managers with a similar return profile. Exposure to financial markets will be gained through investment in a diversified portfolio of Target Funds investing in bonds, equities and alternative investment strategies. The sensitivity of the Fund to movements in interest rates, currency rates and stock prices is limited by combining managers who emphasise different factors in their investment process. By adopting this approach, it is expected that the Fund's performance will be more consistent, less volatile and have lower risk characteristics than single manager investment strategies.

This objective is to be achieved through investing in different types of Target Funds. The Target Funds will invest in fixed income securities, equities and equity related securities of equity and bond markets covering a wide array of market sectors, including commodities and property, and geographical regions, and will employ a diverse spectrum of investment styles and strategies that will allow investors to capture numerous opportunities to achieve profit potential.

Target Funds of Type II may utilise on an ancillary basis a variety of non-traditional strategies and instruments including arbitrage, leverage, short selling and global financial instruments which are not generally available in traditional funds. The purpose of investing in these Target Funds of Type II is to achieve a portfolio structure that has a lower correlation or dependence on the direction of major financial markets, thereby further improving the risk/return characteristics of the Portfolio.

The Fund may employ a currency hedging strategy. This currency hedging strategy will involve hedging the base currency of the Fund against the currency of its investments. The purpose of this currency hedging strategy will not be speculative but will be as a means to protect and manage the Fund relating to its investment objectives.

The Fund may only employ the use of various derivative instruments for the purpose of hedging.

Q4 Please indicate to what extent you agree with the following statements. 1 means strongly disagree, 7 means strongly agree.

	1	2	3	4	5	6	7
I find the presented information easy to understand (1)	○	○	○	○	○	○	○
When reading this text, I get a positive feeling about the fund (2)	○	○	○	○	○	○	○
I find the presented information useful (3)	○	○	○	○	○	○	○

Q5 Imagine you invested in this fund. Please answer the questions below and indicate in the right-hand column how certain you are of your answer.

	1 means very small extent, 7 means very large extent							1 means very uncertain, 7 means very certain						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
To what extent is your risk in this fund spread over different regions? (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
To what extent will you profit from market growth in the EU? (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
To what extent does an investment in this fund respond to any widespread financial turmoil? (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Intro Please read the information below carefully before answering the questions.

Risk	
The Fund is a defensive balanced fund, which means that it invests in various asset classes, including fixed income, equities, cash instruments and alternative investments. The Fund's risk profile is a reflection of a defensive balanced (neutral positioning) risk profile and the risk profiles for the various equity funds, bond funds, hedge funds and other investment institutions in which the Fund invests. The risk profiles for these underlying individual hedge funds may vary from relatively very high (equity funds) to relatively very low (cash/fixed income).	Investment in the Fund is suitable for investors seeking medium-term growth through capital appreciation and willing to bear a moderate level of risk and portfolio volatility with the prospect of positive returns.

Since the Fund will invest in securities denominated in various currencies, changes in foreign currency exchange rates will affect the values of securities in the Fund.

There can be no guarantee that the Fund will achieve the objective sought from the use of the techniques and instruments as described in the full prospectus of the Fund. |

Past performance

	2010	2011	2012	2013	2014	2015
■ Performance	3%	-3%	7%	6%	8%	2%
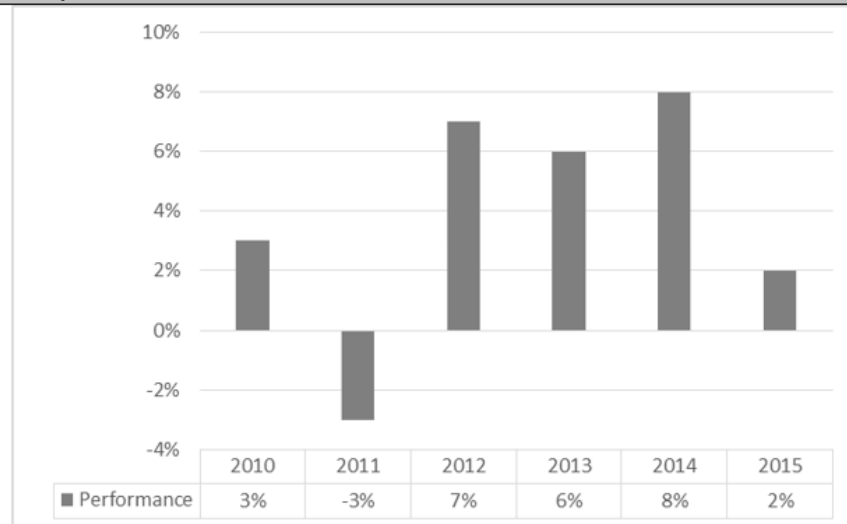
The past performance is not a guarantee for future results.

Q6 Please indicate to what extent you agree with the following statements. 1 means strongly disagree, 7 means strongly agree.

	1	2	3	4	5	6	7
I find the presented information easy to understand (1)	○	○	○	○	○	○	○
When reading this text, I get a positive feeling about the fund (2)	○	○	○	○	○	○	○
I find the presented information useful (3)	○	○	○	○	○	○	○

Q7 Imagine you invested in this fund. Please answer the questions below and indicate in the right-hand column how certain you are of your answer.

	1 means very small/uncertain/low, 7 means very large/certain/high							1 means very uncertain, 7 means very certain						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
How large is the chance that your return will be lower, or you will suffer a loss with this fund? (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
How certain are you of a positive return in five years? (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
How high is the volatility* of the return of this fund? (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q8 * 'volatility is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index.' (source: Investopedia)

Q9 Please answer the following questions. 1 means very low/little, 7 means very high/a lot.

	1	2	3	4	5	6	7
How would you assess your understanding of the presented information? (1)	❍	❍	❍	❍	❍	❍	❍
How would you assess your previous experience with the presented information? (2)	❍	❍	❍	❍	❍	❍	❍

Q10 Would you invest in fund B, based on the presented information? 1 means definitely not, 7 means definitely yes.

1	2	3	4	5	6	7
❍	❍	❍	❍	❍	❍	❍

Q11 What is your sex?

❍ Female (1)
❍ Male (2)

Q12 What is your age?

Q13 What is your highest attained educational degree?

○ Less than high school (1)
○ High school graduate (2)
○ Higher Vocational (3)
○ University Bachelor (4)
○ University Master (5)
○ Professional degree (6)
○ Doctorate (7)

Q14 What is your marital status?

○ Married (1)
○ Living together with a partner (2)
○ Living alone / living with housemates (3)
○ Other, please state: (4) _____

Q15 What is your nationality?

○ Dutch (1)
○ Other, please state: (2) _____

Q16 What is your employment status?

○ Employed full time (1)
○ Employed part time (2)
○ Self-employed (3)
○ Unemployed looking for work (4)
○ Unemployed not looking for work (5)
○ Retired (6)
○ Student (7)
○ Other, please state: (8) _____

Q1 Geef aan hoe u uzelf inschat ten opzichte van anderen bij onderstaande stellingen.

Q2 Beantwoord onderstaande vragen. 1 betekent geen, 7 betekent zeer veel.

	1	2	3	4	5	6	7
In hoeverre was uw educatie toegewijd aan economie? (1)	❍	❍	❍	❍	❍	❍	❍
Hoeveel begrip van economische thema's heeft u nodig in het dagelijks leven (werk, hobby, etc.)? (2)	❍	❍	❍	❍	❍	❍	❍
Hoeveel ervaring heeft u met beleggingsfondsen (beleggen, adviseren, etc.)? (3)	❍	❍	❍	❍	❍	❍	❍

Q3 Stelt u zich de volgende situatie voor: u kunt kiezen tussen een zekere betaling en een willekeurige trekking. In de willekeurige trekking heeft u 50% kans op het ontvangen van 300 euro. U heeft een gelijke kans dat u niets zult ontvangen. Stelt u zich nu voor dat u moet kiezen tussen de willekeurige trekking en de zekere betaling. Hierna worden vijf verschillende situaties aan u voorgelegd. De willekeurige trekking is in elke situatie hetzelfde. De zekere betaling verschilt in elke situatie.

RSNL1 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 160 euro als zekere betaling?

❍ Willekeurige trekking (1)
❍ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 160 Euro as a sure pay... Sure payment Is Selected
RSNL2 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 80 euro als zekere betaling?

❍ Willekeurige trekking (1)
❍ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 80 Euro as a sure paym... Sure payment Is Selected
RSNL3 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 40 euro als zekere betaling?

❍ Willekeurige trekking (1)
❍ Zekere betaling (2)

RSNL4 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 60 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL5 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 70 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL6 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 50 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL7 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 20 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL8 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 30 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 20 Euro as a sure paym... Sure payment Is Selected

RSNL9 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 10 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 5... Random draw Is Selected

RSNL10 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 120 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 120 Euro as a sure pay... Sure payment Is Selected

RSNL11 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 100 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 100 Euro as a sure pay... Sure payment Is Selected

RSNL12 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 90 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

RSNL13 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 110 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

RSNL14 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 140 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

RSNL15 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 150 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

RSNL16 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 130 euro als zekere betaling?

- ○ Willekeurige trekking (1)
- ○ Zekere betaling (2)

RSNL17 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 240 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

RSNL18 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 200 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

RSNL19 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 180 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

RSNL20 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 190 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 180 Euro as a sure pay... Sure payment Is Selected

RSNL21 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 170 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 200 Euro as a sure pay... Random draw Is Selected

RSNL22 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 220 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 220 Euro as a sure pay... Random draw Is Selected

RSNL23 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 230 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 220 Euro as a sure pay... Sure payment Is Selected

RSNL24 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 210 euro als zekere betaling?

○ Willekeurige trekking (1)
○ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 240 Euro as a sure pay... Random draw Is Selected

RSNL25 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 280 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 280 Euro as a sure pay... Sure payment Is Selected

RSNL26 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 260 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 260 Euro as a sure pay... Random draw Is Selected

RSNL27 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 270 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

Answer If What would you prefer: a 50 percent chance of receiving 300 Euro when at the same time there is 50 percent chance of receiving nothing, or would you rather have the amount of 260 Euro as a sure pay... Sure payment Is Selected

RSNL28 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 250 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL29 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 300 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL30 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 290 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

RSNL31 Wat heeft uw voorkeur: 50% kans op het ontvangen van 300 euro, terwijl u tegelijkertijd 50% kans heeft om niets te ontvangen, of ontvangt u liever een bedrag van 310 euro als zekere betaling?

- ◯ Willekeurige trekking (1)
- ◯ Zekere betaling (2)

Q4 Beantwoord onderstaande vragen. Ik wil je verzoeken hierbij geen gebruik te maken van externe hulpbronnen of een rekenmachine.

NL1 Stel u heeft € 100 op een spaarrekening, de rente op deze spaarrekening was 2% per jaar en u neemt nooit geld op van deze rekening. Als u het geld op de rekening laat staan, hoeveel heeft u dan na 5 jaar op uw rekening?

- ◯ Meer dan € 102 (1)
- ◯ Precies € 102 (2)
- ◯ Minder dan € 102 (3)
- ◯ Weet ik niet (4)

NL2 Stel de rente op uw rekening was 1% per jaar en de inflatie was 2% per jaar. Hoeveel kunt u na 1 jaar kopen met het geld op deze rekening?

- ○ Meer dan vandaag (1)
- ○ Precies hetzelfde als vandaag (2)
- ○ Minder dan vandaag (3)
- ○ Weet ik niet (4)

NL3 Stel dat in 2020 uw inkomen is verdubbeld en de prijzen van goederen zijn ook verdubbeld. Hoeveel kunt u in 2020 kopen met uw inkomen?

- ○ Meer dan vandaag (1)
- ○ Precies hetzelfde als vandaag (2)
- ○ Minder dan vandaag (3)
- ○ Weet ik niet (4)

NL4 Welke van de volgende stellingen beschrijft de belangrijkste functie van de effectenbeurs?

- ○ De effectenbeurs helpt met het voorspellen van aandelenresultaten (1)
- ○ De effectenbeurs resulteert in een toename van de prijs van aandelen (2)
- ○ De effectenbeurs brengt mensen die aandelen willen kopen en mensen die aandelen willen verkopen bij elkaar (3)
- ○ Geen van bovenstaande (4)
- ○ Weet ik niet (5)

NL5 welke van de volgende stellingen is correct? Als iemand een aandeel van bedrijf B koopt op de effectenbeurs, dan:

- ○ is hij eigenaar van een deel van bedrijf B (1)
- ○ heeft hij geld geleend aan bedrijf B (2)
- ○ is hij aansprakelijk voor de schulden van bedrijf B (3)
- ○ Geen van bovenstaande (4)
- ○ Weet ik niet (5)

NL6 welke van de volgende stellingen is correct?

○ Als je investeert in een beleggingsfonds, dan kun je het eerste jaar het geld niet opnemen (1)
○ Beleggingsfondsen kunnen meerdere soorten beleggingen doen, bijvoorbeeld zowel in aandelen als in obligaties (2)
○ Beleggingsfondsen betalen een gegarandeerd rendement dat afhangt van de historische resultaten (3)
○ Geen van bovenstaande (4)
○ Weet ik niet (5)

NL7 Welk type belegging fluctueert normaal gesproken het meest in de tijd?

○ Spaarrekening (1)
○ Obligaties (2)
○ Aandeel (3)
○ Beleggingsfonds (4)
○ Weet ik niet (5)

NL8 Als een investeerder zijn geld over verschillende beleggingen spreidt, neemt het risico op verliezen:

○ toe (1)
○ af (2)
○ blijft hetzelfde (3)
○ weet ik niet (4)

NL9 Aandelen zijn normaal gesproken meer risicovol dan obligaties. Waar of niet waar?

○ Waar (1)
○ Niet waar (2)
○ Weet ik niet (3)

NL10 Een aandeel in een bedrijf is normaal gesproken een minder risicovolle belegging, dan een aandeel in een beleggingsfonds. Waar of niet waar?

○ Waar (1)
○ Niet waar (2)
○ Weet ik niet (3)

NL11 Hoe moeilijk vond u de vragen?

○ Zeer makkelijk (1)
○ Makkelijk (2)
○ Een beetje makkelijk (3)
○ Niet makkelijk, niet moeilijk (4)
○ Een beetje moeilijk (5)
○ Moeilijk (6)
○ Zeer moeilijk (7)

Info U wordt nu twee keer gevraagd informatie door te nemen en daar vragen over te beantwoorden. Neem de gepresenteerde informatie aandachtig door, voordat u de vragen beantwoordt.

Essentiële beleggers informatie

Fonds B

Dit document geeft u Essentiële Beleggers Informatie aangaande dit fonds. Het is geen marketingmateriaal. De verstrekte informatie is bij wet voorgeschreven en is bedoeld om u meer inzicht te geven in de aard en de risico's van beleggingen in dit fonds. Wij raden u aan deze informatie te lezen opdat u met kennis van zaken kunt beslissen of u al dan niet in dit fonds wenst te beleggen.

Doelstelling en beleggingsbeleid	
Het doel van Fonds B (hierna: het 'Fonds') is om met een gematigd risico op de middellange termijn vermogensgroei te realiseren.	Het Fonds hanteert geen benchmark. Fonds streeft ernaar om ieder jaar een positief rendement te behalen, maar negatieve rendementen kunnen niet worden uitgesloten.
Hiertoe wordt wereldwijd belegd in vastrentende waarden, aandelen, alternatieve beleggingen en liquiditeiten. Actieve vermogensallocatie wordt toegepast om in te spelen op veranderende marktomstandigheden. Het fondsvermogen wordt verdeeld over gespecialiseerde beleggingsfondsen die binnen hun vermogenscategorie waarde kunnen toevoegen in termen van risico en rendement. Tevens wordt gezocht naar een effectieve verdeling tussen actief en passief beheerde beleggingsfondsen. Daarnaast kan Fonds beleggen in fondsen waarvoor Beleggingsinstelling is aangesteld als portfolio manager dan wel beheerder.	Dagelijks wordt de waarde van de aandelen in het Fonds vastgesteld. Deze intrinsieke waarde wordt iedere werkdag gepubliceerd op de website van de portfolio manager.

De aandelen in Fonds zijn genoteerd aan de Beurs. Het is iedere werkdag mogelijk uit te treden uit het Fonds door verkoop van aandelen aan het Fonds.

Fonds herinvesteert eventuele winsten die behaald worden en heeft niet het voornemen om dividenden uit te keren. |
| De prestaties van Fonds zullen vooral afhangen van de prestaties van de beleggingsinstellingen die zijn geselecteerd en de prestaties van de financiële markten in het algemeen. | |

Q5 Geef aan in hoeverre u het eens bent met onderstande stellingen. 1 betekent sterk niet mee eens, 7 betekent sterk mee eens.

	1	2	3	4	5	6	7
Ik vind de gepresenteerde informatie makkelijk te begrijpen (1)	○	○	○	○	○	○	○
Bij het lezen van deze tekst krijg ik een positief gevoel over het fonds (2)	○	○	○	○	○	○	○
Ik vind de gepresenteerde informatie nuttig (3)	○	○	○	○	○	○	○

Q6 Stel dat u belegt in dit fonds. Beantwoord onderstaande vragen en geef voor ieder antwoord aan hoe zeker u van dit antwoord bent.

	1 betekent zeer kleine mate, 7 betekent zeer grote mate							1 betekent zeer onzeker, 7 betekent zeer zeker						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
In welke mate wordt uw risico in dit fonds gespreid over verschillende regio's en sectoren? (1)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
In welke mate kunt u met dit fonds profiteren van een sterke marktgroei in de EU? (2)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
In welke mate reageert de waarde van dit fonds op wijdverspreide financiële onrust? (3)	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Intro Neem de gepresenteerde informatie aandachtig door, voordat u de vragen beantwoordt.

Risico- en opbrengsten profiel

Lager risico - potentieel lagere opbrengst				Hoger risico - potentieel hogere opbrengst		
1	2	3	4	5	6	7

De historische gegevens, waarop de uitkomst van de bovenstaande risico indicator is gebaseerd, zijn geen betrouwbare weergave van het toekomstige risico- en rendementsprofiel.

Het is niet gegarandeerd dat de getoonde risicocategorie onveranderd blijft. De risicocategorie kan veranderen in de loop van de tijd.

De laagste categorie betekent niet dat de belegging zonder risico is.

De mogelijkheid bestaat dat uw belegging in waarde stijgt, maar het is ook mogelijk dat uw belegging weinig tot niet rendeert en dat uw inleg bij een ongunstig koersverloop geheel of gedeeltelijk verloren gaat. Er worden geen garanties gegeven dat de beleggingsdoelstellingen van het Fonds zullen worden gerealiseerd.

Het risicoprofiel van het Fonds is een afspiegeling van de risicoprofielen van de verschillende aandelenfondsen, obligatiefondsen, hedge fondsen en andere beleggingsinstellingen waar het Fonds in belegt. Het uitgangspunt is dat deze afspiegeling een gematigd defensief risicoprofiel inhoudt.

De wezenlijke relevante risico's van het Fonds die niet adequaat worden weerspiegeld in de indicator:

Bewaarrisico: Verlies kan optreden van in bewaring gegeven activa als gevolg van insolvabiliteit, nalatigheid of frauduleuze handelingen van de bewaarnemer of van een onderbewaarnemer.

In het verleden behaalde resultaten

	2010	2011	2012	2013	2014	2015
Rendement	3.0%	-3.0%	7.0%	6.0%	8.0%	2.0%
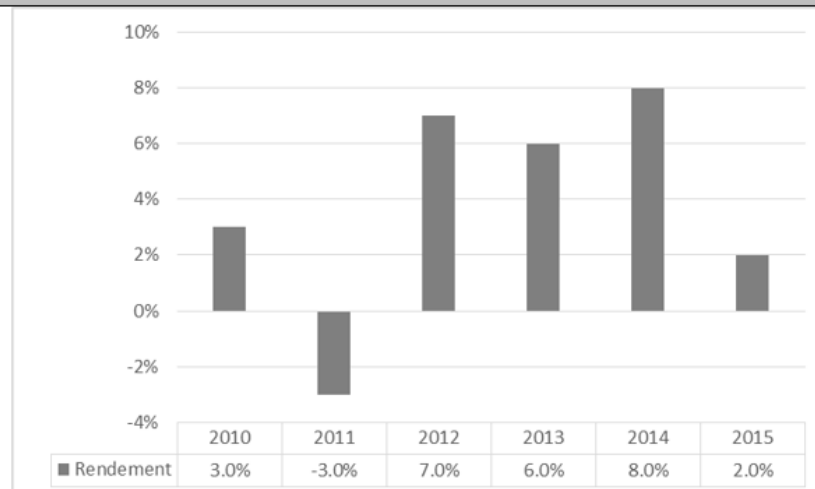
De resultaten uit het verleden vormen geen garantie voor toekomstige resultaten.

De lopende en transactiekosten van het Fonds zijn opgenomen in de berekening van de resultaten uit het verleden. Bij de berekening van de resultaten uit het verleden is geen rekening gehouden met instap-/uitstapkosten.

Omdat het Fonds pas sinds 30 juni 2010 bestaat, is in het staafdiagram het beleggingsresultaat vanaf die datum opgenomen.

De resultaten uit het verleden zijn berekend in EUR.

Q7 Geef aan in hoeverre u het eens bent met onderstaande stellingen. 1 betekent sterk niet mee eens, 7 betekent sterk mee eens.

	1	2	3	4	5	6	7
Ik vind de gepresenteerde informatie makkelijk te begrijpen (1)	○	○	○	○	○	○	○
Bij het lezen van deze tekst krijg ik een positief gevoel over het fonds (2)	○	○	○	○	○	○	○
Ik vind de gepresenteerde informatie nuttig (3)	○	○	○	○	○	○	○

Q8 Stel dat u belegt in dit fonds. Beantwoord onderstaande vragen en geef aan hoe zeker u van ieder antwoord bent.

	1 betekent zeer klein/onzeker/laag, 7 betekent zeer groot/zeker/hoog							1 betekent zeer onzeker, 7 betekent zeer zeker						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Hoe groot is de kans dat u minder rendement, of zelfs verlies maakt bij een belegging in dit fonds? (1)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hoe zeker bent u van een positief resultaat na 5 jaar? (2)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hoe hoog is de volatiliteit van het rendement van dit fonds? (3)	○	○	○	○	○	○	○	○	○	○	○	○	○	○

expl. * 'Volatiliteit meet de variabiliteit van de prijs- of koersschommelingen van aandelen, indices of portefeuillewaarden gedurende een bepaalde periode tegenover de gemiddelde prijs of koers over die periode.' (Bron: KBC Asset Management)

Intro U wordt nu twee keer gevraagd informatie door te nemen en daar vragen over te beantwoorden. Neem de gepresenteerde informatie aandachtig door, voordat u de vragen beantwoordt.

Fonds B

Doel en beleggingsbeleid	
Fonds B (hierna: het 'Fonds') stelt zich ten doel absolute beleggingsrendementen te behalen, overeenkomstig een defensief gemengd profiel. Het Fonds probeert beter te presteren dan fondsbeheerders met een vergelijkbaar risicoprofiel. Het Fonds wordt blootgesteld aan de financiële markten door te beleggen in een gevarieerde portefeuille van fondsbeheerders, die zijn gespecialiseerd in obligaties, aandelen en alternatieve beleggingsstrategieën. Er wordt beoogd deze beheerders zodanig met elkaar te combineren dat de spreiding van de portefeuille optimaal is en de gevoeligheid van het Fonds voor schommelingen in het rentepercentage, de wisselkoersen en de aandelenprijzen wordt beperkt. Door te kiezen voor deze aanpak, kan worden verwacht dat het rendement van het Fonds stabieler en minder volatiel is en dat het risico lager ligt, dan bij een belegging in een enkele fondsbeheerder. Om het doel te behalen belegt het Fonds in verschillende fondsbeheerders. De fondsbeheerders zullen beleggen in vastrentende effecten, aandelen en met aandelen verwante effecten op aandelen- en obligatiebeurzen, die een breed scala van marktsectoren, grondstoffen en onroerend goed inbegrepen, en geografische regio's bestrijken, en zullen een divers spectrum van beleggingsstijlen en -strategieën inzetten, die beleggers in staat stellen op talrijke wijzen rendement te behalen.	De fondsbeheerders van Type II mogen aanvullend gebruik maken van diverse niet traditionele strategieën en instrumenten, waaronder arbitrage, hefboomconstructies, short selling en wereldwijde financiële instrumenten die normaal gesproken niet beschikbaar zijn voor een traditioneel fonds. Het doel van de beleggingen van deze fondsbeheerders is om een portefeuille samen te stellen die een lagere correlatie of afhankelijkheid heeft van de ontwikkelingen op de grote financiële markten. Hierdoor wordt het risicokarakter van het fonds verbeterd. Het Fonds kan een valuta hedging strategie aanhouden. Deze strategie zal inhouden dat de referentievaluta van het Fonds wordt gehedged tegen de valuta van de beleggingen. De hedging strategie zal geen speculatief doel hebben, enkel het doel om de door het Fonds beoogde doelstelling te beschermen en te beheren. Het Fonds mag alleen gebruik maken van verscheidende derivaten om risico's af te dekken.

Q5 Geef aan in hoeverre u het eens bent met onderstande stellingen. 1 betekent sterk niet mee eens, 7 betekent sterk mee eens.

	1	2	3	4	5	6	7
Ik vind de gepresenteerde informatie makkelijk te begrijpen (1)	○	○	○	○	○	○	○
Bij het lezen van deze tekst krijg ik een positief gevoel over het fonds (2)	○	○	○	○	○	○	○
Ik vind de gepresenteerde informatie nuttig (3)	○	○	○	○	○	○	○

Q6 Stel dat u belegt in dit fonds. Beantwoord onderstaande vragen en geef voor ieder antwoord aan hoe zeker u van dit antwoord bent.

	1 betekent zeer kleine mate, 7 betekent zeer grote mate							1 betekent zeer onzeker, 7 betekent zeer zeker						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
In welke mate wordt uw risico in dit fonds gespreid over verschillende regio's en sectoren? (1)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
In welke mate kunt u met dit fonds profiteren van een sterke marktgroei in de EU? (2)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
In welke mate reageert de waarde van dit fonds op wijdverspreide financiële onrust? (3)	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Intro Neem de gepresenteerde informatie aandachtig door, voordat u de vragen beantwoordt.

Risico's	
Het Fonds is een gematigd defensief fonds, wat betekent dat het belegt in verschillende beleggingsproducten, zoals vastrentende effecten, aandelen, cashinstrumenten en alternatieve beleggingsstrategieën. Het risicoprofiel van het Fonds is een weerspiegeling van dit gematigd defensieve profiel (neutrale positie) en het risicoprofiel van de verschillende aandelenfondsen, obligatiefondsen, hedge funds en andere beleggingsinstellingen waarin het Fonds heeft belegd. De risicoprofielen van deze onderliggende individuele hedge funds kunnen variëren van zeer hoog (aandelenfondsen) tot relatief zeer laag (cash/vast).	Doordat het Fonds belegt in effecten uitgedrukt in verschillende valuta, hebben veranderingen in de wisselkoers van deze valuta een effect op de waarde van de effecten in het Fonds.
Participeren in dit Fonds is geschikt voor beleggers die zoeken naar groei op de middellange termijn door waardevermeerdering en die bereid zijn om in een beperkte mate risico te lopen en portefeuille volatiliteit beperkt toestaan met het vooruitzicht op positief rendement.	Het Fonds kan geen garantie geven dat de gebruikte technieken en instrumenten, zoals beschreven in de volledige prospectus, zullen leiden tot het beoogde resultaat.

In het verleden behaalde resultaten

	2010	2011	2012	2013	2014	2015
■ Rendement	3.0%	-3.0%	7.0%	6.0%	8.0%	2.0%
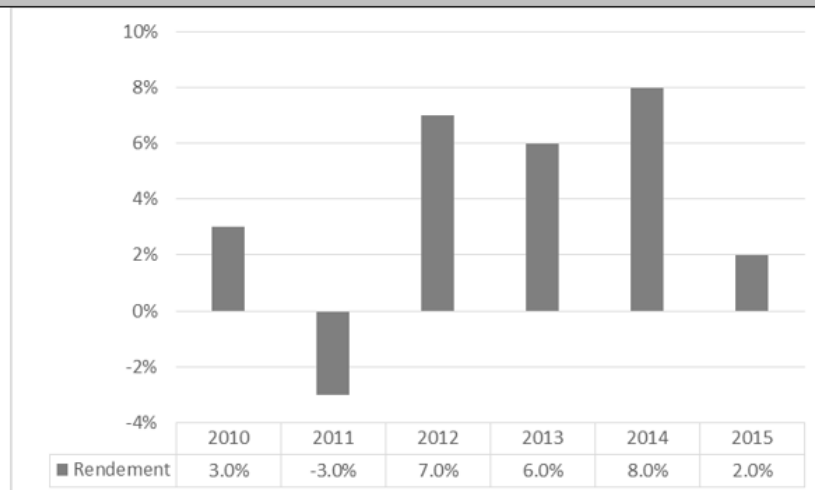
De resultaten uit het verleden vormen geen garantie voor toekomstige resultaten.

Q7 Geef aan in hoeverre u het eens bent met onderstaande stellingen. 1 betekent sterk niet mee eens, 7 betekent sterk mee eens.

	1	2	3	4	5	6	7
Ik vind de gepresenteerde informatie makkelijk te begrijpen (1)	○	○	○	○	○	○	○
Bij het lezen van deze tekst krijg ik een positief gevoel over het fonds (2)	○	○	○	○	○	○	○
Ik vind de gepresenteerde informatie nuttig (3)	○	○	○	○	○	○	○

Q8 Stel dat u belegt in dit fonds. Beantwoord onderstaande vragen en geef aan hoe zeker u van ieder antwoord bent.

	1 betekent zeer klein/onzeker/laag, 7 betekent zeer groot/zeker/hoog							1 betekent zeer onzeker, 7 betekent zeer zeker						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Hoe groot is de kans dat u minder rendement, of zelfs verlies maakt bij een belegging in dit fonds? (1)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hoe zeker bent u van een positief resultaat na 5 jaar? (2)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hoe hoog is de volatiliteit van het rendement van dit fonds? (3)	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Expl. * 'Volatiliteit meet de variabiliteit van de prijs- of koersschommelingen van aandelen, indices of portefeuillewaarden gedurende een bepaalde periode tegenover de gemiddelde prijs of koers over die periode.' (Bron: KBC Asset Management)

Q9 Beantwoord de volgende vragen. 1 betekent helemaal niet, 7 betekent volledig/veel.

	1	2	3	4	5	6	7
In hoeverre denkt u dat u de hiervoor gepresenteerde informatie heeft begrepen? (1)	○	○	○	○	○	○	○
In hoeverre had u al ervaring met de hiervoor gepresenteerde informatie? (2)	○	○	○	○	○	○	○

Q10 Zou u, op basis van de gepresenteerde informatie, in dit product beleggen? 1 betekent zeker niet, 7 betekent zeer zeker.

1	2	3	4	5	6	7
○	○	○	○	○	○	○

Q11 Wat is uw geslacht

○ Vrouw (1)
○ Man (2)

Q12 Wat is uw leeftijd?

Q13 Wat is uw hoogst genoten opleiding?

- ○ Minder dan de middelbare school (1)
- ○ Middelbare school / MBO (2)
- ○ HBO (3)
- ○ Universiteit Bachelor (4)
- ○ Universiteit Master (5)
- ○ Professional degree (6)
- ○ Doctorate (7)

Q14 Wat is uw huwelijkse staat

- ○ Getrouwd (1)
- ○ Samenwonend met een partner (2)
- ○ Alleenstaand (3)
- ○ Anders, namelijk (4) _____

Q15 Wat is uw nationaliteit?

- ○ Nederlands (1)
- ○ Anders, namelijk (2) _____

Q16 Welke van de volgende mogelijkheden beschrijft uw werksituatie het beste?

- ○ full time werkende (1)
- ○ part time werkende (2)
- ○ Zelfstandige (3)
- ○ Werkloos en werkzoekend (4)
- ○ Werkloos en niet werkzoekend (5)
- ○ Gepensioneerd (6)
- ○ Student (7)
- ○ Anders, namelijk (8) _____

IV.   Table III

Table III: Demographic profile

Category	Demographic profile (N=95)	Frequency	Percentage
Gender	Male	42	44.21%
	Female	53	55.79%
Age	< 25	26	27.96%
	25-34	50	53.76%
	35-44	7	7.53%
	45-54	1	1.08%
	> 55	9	9.68%
Marital status	Married	17	17.89%
	Living together with a partner	22	23.16%
	Other	56	58.95%
Employment status	Employed fulltime	50	52.63%
	Employed part time	7	7.37%
	self-employed	3	3.16%
	unemployed looking for work	0	0.00%
	unemployed not looking for work	1	1.05%
	retired	0	0.00%
	student	33	34.74%
	other	1	1.05%
Highest attained education	Less than high school	0	0.00%
	High school graduate	4	4.21%
	Higher Vocational	18	18.95%
	University Bachelor	20	21.05%
	University Master	50	52.63%
	Professional degree	3	3.16%
	Doctorate	0	0.00%
Nationality	Dutch	86	90.53%
	Other	9	9.47%

V.   Table IV

Table IV: descriptive statistics

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
Language	Lang	Engels (1), Nederlands (0)	0.136 (0.346)	0.184 (0.391)	0.087 (0.285)	-1.370	n/a	n/a	n/a	n/a
Self-assessed understanding of economics	und_econ	far below average (1), far above average (7)	4.842 (1.315)	4.980 (1.331)	4.696 (1.297)	-1.053	5	5	5	1.087
self-assessed willingness to take risks	will_risk	far below average (1), far above average (7)	3.779 (1.322)	4.000 (1.414)	3.543 (1.187)	-1.698*	4	4	4	2.599
economic education	edu_econ	none at all (1), a great deal (7)	4.705 (1.827)	4.837 (1.784)	4.565 (1.882)	-0.722	5	5	5	0.444
need for economic understanding in daily life	daily_econ	none at all (1), a great deal (7)	4.505 (1.501)	4.735 (1.455)	4.261 (1.527)	-1.549	5	5	4.500	2.174
experience with mutual funds	exp_mf	none at all (1), a great deal (7)	2.811 (1.853)	3.020 (2.026)	2.587 (1.641)	-1.142	2	2	2	0.759
risk staircase	risk	very risk averse (1), very risk prefering (32)	12.463 (4.991)	12.612 (4.631)	12.304 (5.395)	-0.299	12	13	12	0.606

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
BFK: interest	q_1	wrong (-1), don't know (0), right (1)	0.979 (0.205)	0.959 (0.286)	1.000 (0.000)	0.969	n/a	n/a	n/a	n/a
BFK: inflation and interest (percentage)	q_2	wrong (-1), don't know (0), right (1)	0.989 (0.103)	1.000 (0.000)	0.978 (0.147)	-1.032	n/a	n/a	n/a	n/a
BFK: inflation and interest (absolute numbers)	q_3	wrong (-1), don't know (0), right (1)	0.853 (0.525)	0.796 (0.612)	0.913 (0.412)	1.087	n/a	n/a	n/a	n/a
AFK: stock market	q_4	wrong (-1), don't know (0), right (1)	0.853 (0.461)	0.878 (0.389)	0.826 (0.529)	-0.542	n/a	n/a	n/a	n/a
AFK: stocks	q_5	wrong (-1), don't know (0), right (1)	0.737 (0.656)	0.796 (0.577)	0.674 (0.732)	-0.905	n/a	n/a	n/a	n/a
AFK: mutual funds	q_6	wrong (-1), don't know (0), right (1)	0.663 (0.594)	0.612 (0.671)	0.717 (0.502)	0.860	n/a	n/a	n/a	n/a
AFK: fluctuations	q_7	wrong (-1), don't know (0), right (1)	0.716 (0.577)	0.735 (0.569)	0.696 (0.591)	-0.328	n/a	n/a	n/a	n/a
AFK: risk spread	q_8	wrong (-1), don't know (0), right (1)	0.895 (0.449)	0.918 (0.400)	0.870 (0.499)	-0.527	n/a	n/a	n/a	n/a

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
AFK: Stocks and bonds	q_9	wrong (-1), don't know (0), right (1)	0.695 (0.654)	0.612 (0.759)	0.783 (0.513)	1.274	n/a	n/a	n/a	n/a
AFK: company and mutual fund stocks	q_10	wrong (-1), don't know (0), right (1)	0.674 (0.626)	0.653 (0.663)	0.696 (0.591)	0.330	n/a	n/a	n/a	n/a
Total score on BFK questions	basic_FL	everything correct (3), everything incorrect (-3)	2.821 (0.635)	2.755 (0.778)	2.891 (0.434)	1.044	n/a	n/a	n/a	n/a
Total score on AFK questions	Adv_FL	everything correct (7), everything incorrect (-7)	5.221 (2.100)	5.184 (2.108)	5.261 (2.113)	0.178	n/a	n/a	n/a	n/a
Self-assessed difficulty of knowledge questions	SA_FL	extremely easy (1), extremely difficult (7)	3.937 (1.435)	3.837 (1.505)	4.043 (1.366)	0.700	4	4	4	0.415
Dummy variable for type of information	KIID	KIID (1), SP (0)	0.516 (0.502)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Self-assessed understanding of the presented information (part 1)	und_one	strongly disagree (1), strongly agree (7)	3.474 (1.583)	3.755 (1.627)	3.174 (1.495)	-1.809	3	4	3	2.972*
Postive feeling on the presentede information (part 1)	post_one	strongly disagree (1), strongly agree (7)	3.579 (1.293)	3.469 (1.260)	3.696 (1.331)	0.851	3	4	4	1.315

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
Presented information found useful (part 1)	useful_one	strongly disagree (1), strongly agree (7)	3.800 (1.419)	3.837 (1.448)	3.761 (1.401)	-0.259	4	4	4	0.047
spread of risks	spread	very small extent (1), very large extent (7)	5.000 (1.459)	4.531 (1.542)	5.500 (1.188)	3.416***	5	5	6	10.957***
certainty of spread of risks	spread_c	very uncertain (1), very certain (7)	4.768 (1.653)	4.367 (1.944)	5.196 (1.147)	2.508**	5	4	5	3.564*
profit from growth	growth	very small extent (1), very large extent (7)	3.916 (1.136)	3.796 (1.190)	4.043 (1.074)	1.062	4	4	4	0.516
certainty of profit of growth	growt_c	very uncertain (1), very certain (7)	3.874 (1.619)	3.735 (1.680)	4.022 (1.556)	0.862	4	4	4	0.696
responds to financial turmoil	turmoil	very small extent (1), very large extent (7)	4.379 (1.565)	4.755 (1.548)	3.978 (1.498)	-2.483**	5	5	4	6.094**
certainty of responds to financial turmoil	turmoil_c	very uncertain (1), very certain (7)	4.526 (1.508)	1.531 (1.647)	4.522 (1.362)	-0.029	5	5	5	0.014
Self-assessed understanding of the presented information (part 2)	und_two	strongly disagree (1), strongly agree (7)	4.547 (1.514)	4.735 (1.617)	4.348 (1.386)	-1.248	5	5	5	2.120

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
Postive feeling on the presented information (part 2)	post_two	strongly disagree (1), strongly agree (7)	3.737 (1.331)	3.510 (1.416)	3.978 (1.202)	1.732*	4	4	4	2.504
Presented information found useful (part 2)	useful_two	strongly disagree (1), strongly agree (7)	4.274 (1.505)	4.245 (1.690)	4.304 (1.297)	0.191	5	5	5	0.048
chance of losses	loss	very small (1), very large (7)	3.863 (1.172)	3.857 (1.225)	3.870 (1.128)	0.051	4	3	4	0.064
certainty of chance of losses	loss_c	very uncertain (1), very certain (7)	4.811 (1.371)	4.837 (1.477)	4.783 (1.263)	-0.191	5	5	5	0.268
positive return	return	very uncertain (1), very certain (7)	4.095 (1.361)	4.143 (1.369)	4.043 (1.366)	-0.354	4	4	4	0.162
certainty of positive return	return_c	very uncertain (1), very certain (7)	4.716 (1.294)	4.653 (1.480)	4.783 (1.073)	0.486	5	5	5	0.001
volatility	vol	very low (1), very high (7)	4.442 (1.252)	4.306 (1.417)	4.587 (1.045)	1.093	5	5	5	0.665
certainty of volatility	vol_c	very uncertain (1), very certain (7)	4.379 (1.638)	4.367 (1.776)	4.391 (1.498)	0.071	5	5	4.500	0.008

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
Self-assessed overall understanding	und_info	very low (1), very high (7)	4.516 (1.465)	4.714 (1.472)	4.304 (1.444)	-1.369	5	5	5	1.708
Experience with presented information	exp_info	very little (1), a lot (7)	3.495 (1.688)	3.673 (1.737)	3.304 (1.631)	-1.066	3	4	3	1.126
Willingness to invest in presented fund	invest	definitely not (1), definitely yes (7)	3.263 (1.510)	3.204 (1.457)	3.326 (1.578)	0.392	3	3	3	0.141
Sex	S	female (1), male (0)	0.558 (0.499)	0.449 (0.503)	0.674 (0.474)	2.241**	n/a	n/a	n/a	n/a
Age	age	number	30.863 (11.501)	31.082 (11.761)	30.630 (11.342)	-0.190	n/a	n/a	n/a	n/a
Highest attained education	edu	less than high school (1), doctorate (7)	4.316 (0.959)	4.265 (0.974)	4.370 (0.951)	0.527	5	5	5	0.180
Married	married	Married (1), other (0)	0.179 (0.385)	0.184 (0.391)	0.174 (0.383)	-0.123	n/a	n/a	n/a	n/a
Living together with a partner	livtog	living together (1), other (0)	0.232 (0.424)	0.224 (0.422)	0.239 (0.431)	0.167	n/a	n/a	n/a	n/a

Variable	Name in Eviews	Value	Mean (st. dev.)				Median			
			All[1]	KIID[2]	SP[3]	t-value[4]	All	KIID	SP	Kruskal-Wallis[5]
Nationality	nat	Dutch (0), other (1)	0.095 (0.294)	0.102 (0.306)	0.087 (0.285)	-0.248	n/a	n/a	n/a	n/a
Employed full-time	full	Employed fulltime (1)	0.526 (0.502)	0.571 (0.500)	0.478 (0.505)	-0.903	n/a	n/a	n/a	n/a
Employed part-time	part	Employed part time (1)	0.074 (0.262)	0.000 (0.000)	0.152 (0.363)	2.934***	n/a	n/a	n/a	n/a
Self-employed	self	self-employed (1)	0.063 (0.352)	0.102 (0.467)	0.022 (0.147)	-1.114	n/a	n/a	n/a	n/a
Unemployed and not looking for work	unem_nlw	unemployed not looking for work (1)	0.011 (0.103)	0.000 (0.000)	0.022 (0.147)	1.032	n/a	n/a	n/a	n/a
Student	stu	student (1)	0.347 (0.479)	0.367 (0.487)	0.326 (0.474)	-0.418	n/a	n/a	n/a	n/a
Other	oth	other (1)	0.011 (0.103)	0.020 (0.143)	0.000 (0.000)	-0.969	n/a	n/a	n/a	n/a

[1] Total number of observations is 95. [2] Total number of observations for the KIID is 49. [3] Total number of observations for the SP is 46. [4] H_0: $\mu_{KIID} = \mu_{SP}$, H_a $\mu_{KIID} \neq \mu_{SP}$. [5] H_0: the two subsamples come from the same population, H_a: the two subsamples do not come from the same population. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.

VI.   Graph I

Graph I: Age distribution
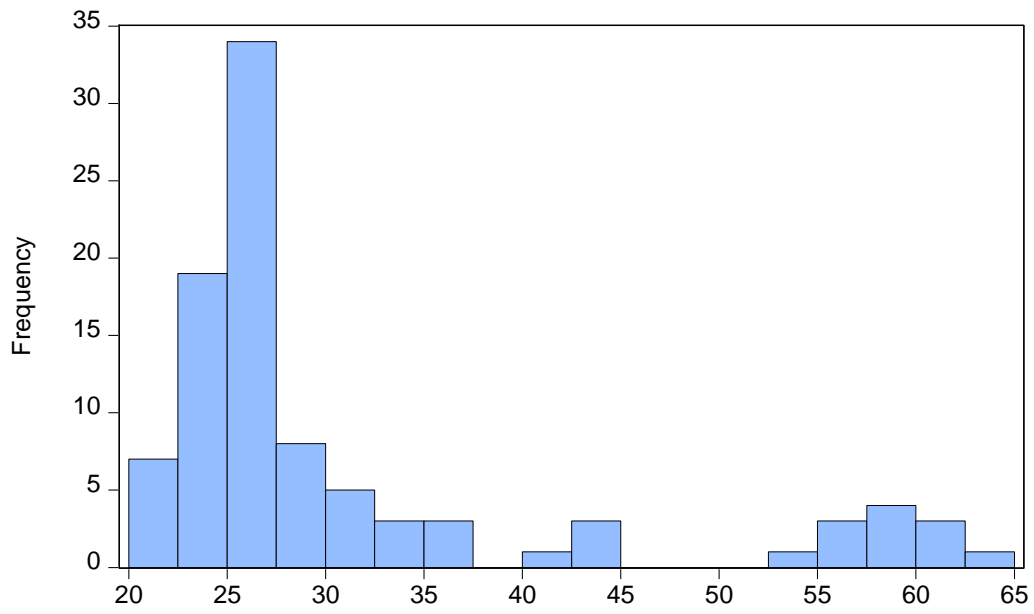
VII.   Graph II

Graph II: Distribution Experience with mutual funds
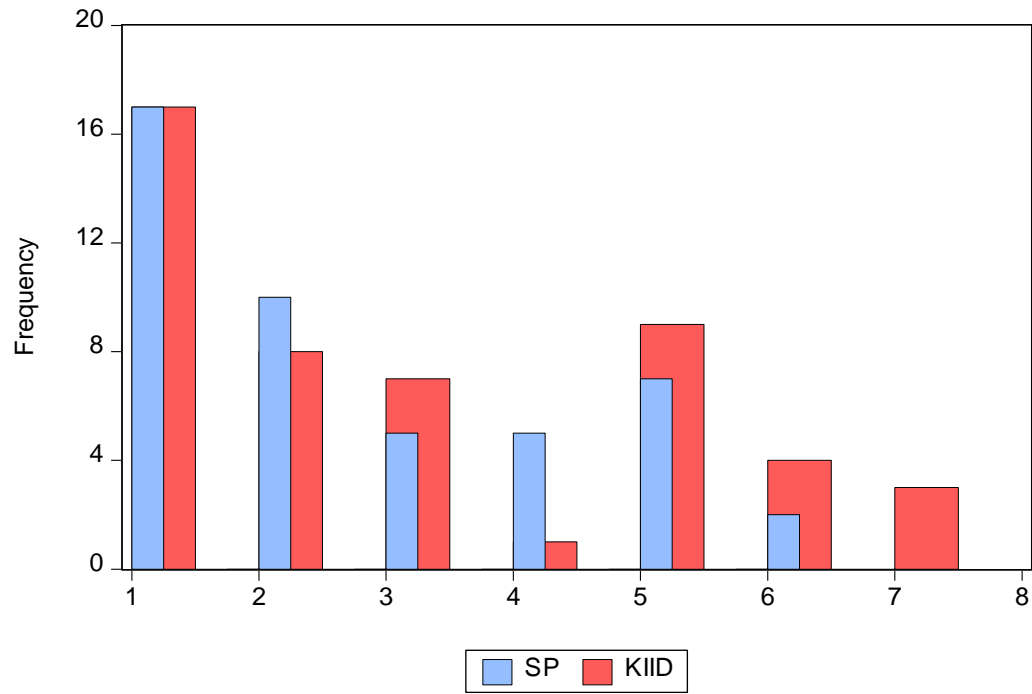
VIII.   Graph III

Graph III: Distribution experience with the presented information

SP
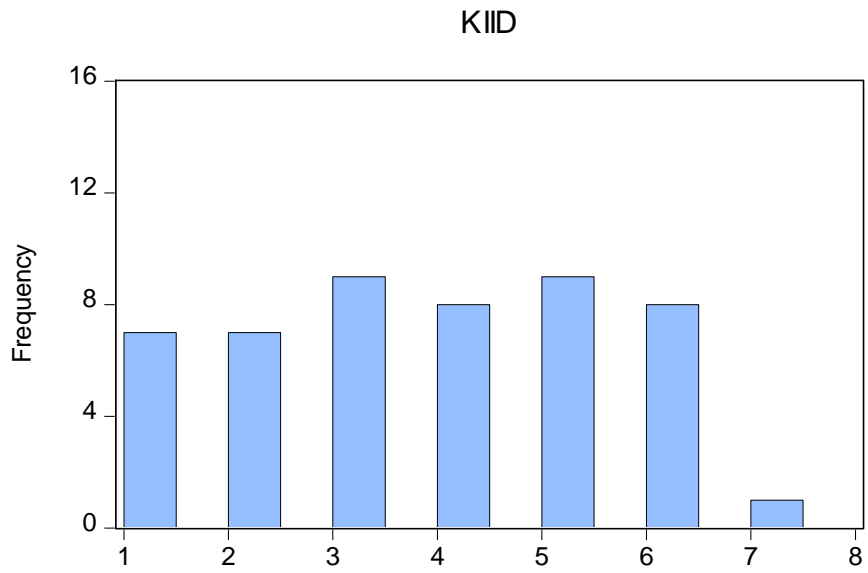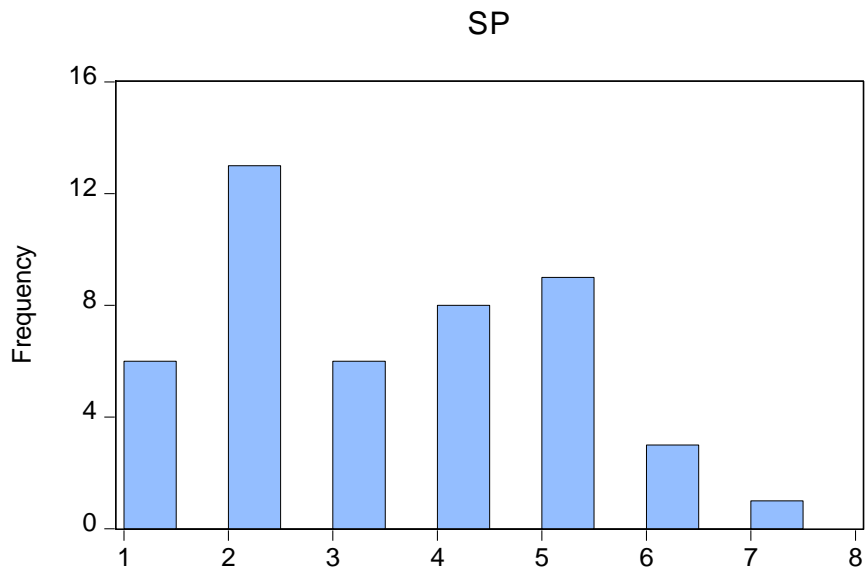
KIID

IX.   Table V

Table V: Answers per question

	Right		Wrong		Do not know	
	SP	KIID	SP	KIID	SP	KIID
Q4.1[1]	46	48	0	1	0	0
Q4.2	45	49	0	0	1	0
Q4.3	44	44	2	5	0	0
Q4.4	41	44	3	1	0	4
Q4.5	38	43	7	4	1	2
Q4.6	34	35	1	5	11	9
Q4.7	35	39	3	3	8	7
Q4.8	43	47	3	2	0	0
Q4.9	38	38	2	8	6	3
Q4.10	35	37	3	5	8	7

[1] Question numbers correspond to the numbers used in the survey (Appendix III)

X.   Correlation tables

Table VI: accuracy

Correlation Probability	KIID	EDU	EDU_ECON	EXP_MF	DAILY_ECON	MF_FL	UND_INFO	UND_ONE	UND_TWO
KIID	1.000								

EDU	-0.0546	1.000							
	0.599	-----							
EDU_ECON	0.075	0.139	1.000						
	0.472	0.180	-----						
EXP_MF	0.118	-0.002	0.386	1.000					
	0.257	0.986	0.000	-----					
DAILY_ECON	0.159	0.206	0.505	0.452	1.000				
	0.125	0.046	0.000	0.000	-----				
MF_FL	-0.010	0.095	0.362	0.408	0.409	1.000			
	0.921	0.359	0.000	0.000	0.000	-----			
UND_INFO	0.141	0.193	0.451	0.393	0.446	0.360	1.000		
	0.174	0.061	0.000	0.000	0.000	0.000	-----		
UND_ONE	0.184	0.083	0.512	0.256	0.355	0.212	0.591	1.000	
	0.074	0.426	0.000	0.012	0.000	0.039	0.000	-----	
UND_TWO	0.128	-0.003	0.390	0.132	0.228	0.152	0.663	0.521	1.000
	0.215	0.976	0.000	0.202	0.026	0.142	0.000	0.000	-----

Table VII: variance

Correlation Probability	KIID	EXP_MF	EDU_ECON	MF_FL	UND_TWO	SA_FL	EDU	DAILY_ECON	UND_ONE	UND_INFO
KIID	1.000									

EXP_MF	0.118	1.000								
	0.257	-----								
EDU_ECON	0.075	0.386	1.000							
	0.472	0.000	-----							
MF_FL	-0.010	0.408	0.362	1.000						
	0.921	0.000	0.000	-----						
UND_TWO	0.128	0.132	0.390	0.152	1.000					
	0.215	0.202	0.000	0.142	-----					
SA_FL	-0.072	-0.629	-0.458	-0.375	-0.268	1.000				
	0.486	0.000	0.000	0.000	0.009	-----				

EDU	-0.055	-0.002	0.139	0.095	-0.003	-0.016	1.000		
	0.599	0.986	0.180	0.359	0.976	0.876	-----		
DAILY_ECON	0.159	0.452	0.505	0.409	0.228	-0.509	0.206	1.000	
	0.125	0.000	0.000	0.000	0.026	0.000	0.046	-----	
UND_ONE	0.184	0.256	0.512	0.212	0.521	-0.502	0.083	0.355	1.000
	0.074	0.012	0.000	0.039	0.000	0.000	0.426	0.000	-----
UND_INFO	0.141	0.393	0.451	0.360	0.663	-0.495	0.193	0.446	0.591	1.000
	0.174	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	-----

Table VIII: confidence

Correlation
Probability

	KIID	EXP_MF	EDU_ECON	DAILY_ECON	EXP_INFO	AGE	USEFUL_ONE	USEFUL_TWO	POST_ONE	POST_TWO
KIID	1.000									

EXP_MF	0.118	1.000								
	0.257	-----								
EDU_ECON	0.075	0.386	1.000							
	0.472	0.000	-----							
DAILY_ECON	0.159	0.452	0.505	1.000						
	0.125	0.000	0.000	-----						
EXP_INFO	0.110	0.612	0.503	0.463	1.000					
	0.289	0.000	0.000	0.000	-----					
AGE	0.020	0.216	-0.227	-0.077	0.069	1.000				
	0.850	0.036	0.027	0.460	0.505	-----				
USEFUL_ONE	0.027	0.066	0.359	0.143	0.286	-0.332	1.000			
	0.796	0.523	0.000	0.167	0.005	0.001	-----			
USEFUL_TWO	-0.020	0.042	0.262	0.009	0.156	-0.252	0.614	1.000		
	0.849	0.688	0.010	0.933	0.132	0.014	0.000	-----		
POST_ONE	-0.088	-0.003	0.222	0.166	0.194	-0.326	0.476	0.311	1.000	
	0.397	0.980	0.031	0.109	0.060	0.001	0.000	0.002	-----	
POST_TWO	-0.177	0.178	0.217	0.067	0.144	-0.108	0.327	0.626	0.158	1.000
	0.087	0.084	0.035	0.517	0.164	0.297	0.001	0.000	0.127	-----

XI.   Variance inflation factors (centered)

Table IX: accuracy

	Dependent variable					
	Accuracy		accuracy part 1		accuracy part 2	
	1	2	3	4	5	6
KIID	1.225	1.147	1.336	1.155	1.450	1.095
Education	1.215		1.414		1.109	
Economic education	2.338		1.590		2.954	
Experience with mutual funds	1.545	1.330	1.650	1.239	2.508	2.272
Daily experience with economics	2.260		1.640		3.424	
Knowledge about mutual funds	1.461	1.333	1.371	1.256	3.046	2.650
Understanding of the presented information	1.360	1.298				
Understanding of the presented information (1)			1.507	1.163		
Understanding of the presented information (2)					1.866	1.464

Table X: variance

	Dependent variable			
	V	Log(V)		
	1	2	3	4
KIID	1.121	1.097	1.056	1.056
Education	2.087	1.804		
Economic education	2.481	2.183		1.960
Experience with mutual funds	1.830	1.589	1.294	1.618
Daily experience with economics	2.092	2.057	1.160	

Knowledge about mutual funds	1.231	1.333	1.302	1.281
Understanding of the presented information	1.878	1.593	1.163	1.482
Understanding of the presented information (1)				
Understanding of the presented information (2)				
Self-assessed financial literacy				1.918

Table XI: variance robustness checks

	Dependent variable						
	V part 1		V part 2		V high	V low	
	5	6	7	8	9	10	11
KIID	1.131	1.153	1.050	1.448	1.515	1.662	1.383
Education							
Economic education		1.592		1.458	1.917	2.453	
Experience with mutual funds	1.370	1.801	1.367	1.935	1.474	2.221	1.215
Daily experience with economics	1.245		1.421				
Knowledge about mutual funds	1.261	1.203	1.318	1.560	1.153	2.467	
Understanding of the presented information					2.352	2.139	1.588
Understanding of the presented information (1)	1.167	1.438					
Understanding of the presented information (2)			1.071	1.233			
Self-assessed financial literacy		1.997		2.278	1.819	1.871	

Table XII: confidence

| | Dependent variable | | | | |
| | Confidence | | | | |
	1	2	3	4	5
KIID	1.265	1.174	1.143	1.189	1.069
Education					
Economic education	1.602	1.268	1.152	1.209	1.105
Experience with mutual funds	1.698	1.306	1.268	1.223	1.115
Daily experience with economics	1.421				
Experience with the presented information	1.595				
Age	1.240	1.142	1.261	1.468	1.214
Having a positive feeling about the presented information			2.133		1.197
Finding the presented information useful			2.229	1.357	

Table XIII: confidence robustness checks

| | Dependent variable | | | | | |
| | Confidence part 1 | | Confidence part 1 | | C_i Exp | C_i n-exp |
	6	7	8	9	10	11
KIID	1.036	1.201	1.467	1.429	1.111	1.173
Education						
Economic education	1.644	1.892	1.658	1.540		
Experience with mutual funds	1.512	1.644	1.938	1.682		
Experience with the presented information	1.577	1.634	1.510	1.250	1.036	1.250
Age	1.299	1.351	1.229	1.250	1.245	1.024

Having a positive feeling about the presented information	1.382	1.605	1.263	1.079
Finding the presented information useful	1.441	1.708		

XII.   Graph IV

Graph IV: Distribution of variance

CT_TOT by V_DUMMY
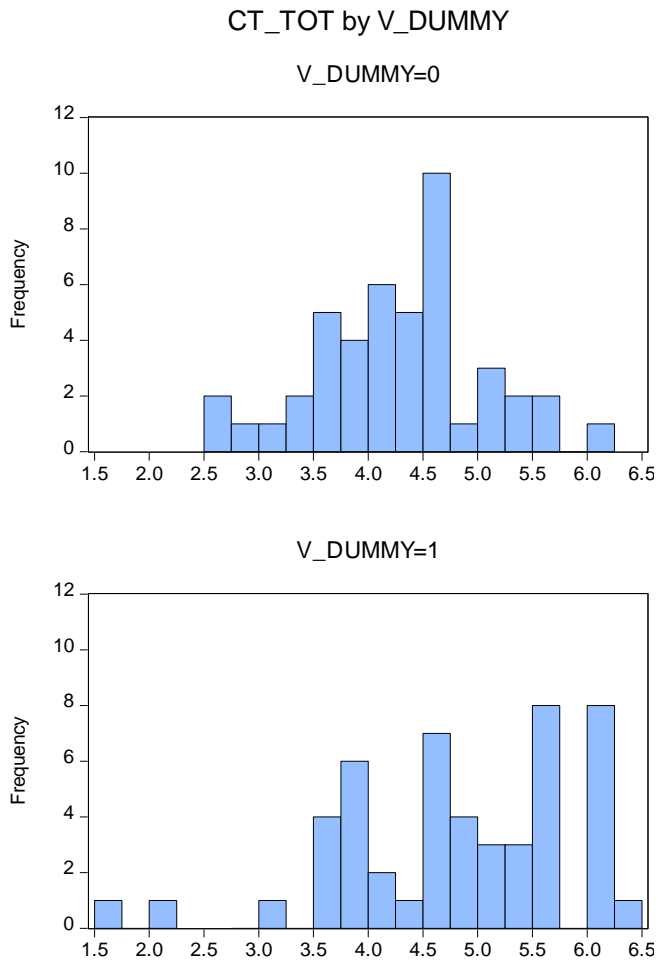
V_DUMMY=0

V_DUMMY=1

CT_TOT is the confidence level.

V_DUMMY=0 means low variance.

V_DUMMY=1 means high variance.

XIII.   The investment decision

In this appendix the data used in this thesis is used to test the effect of confidence on the investment decision. As previously mentioned, Gill et al. (1998) stated that confidence has an effect on the decision to translate beliefs into actions. This has not yet been tested on an individual level. Here a first analysis of this proposed effect is estimated. In the survey a question was added on whether or not the respondent would invest in the presented fund. The respondent could answer this question on a 1 to 7 Likert scale, with 7 being very likely and 1 being very unlikely. This scale is used as a proxy for the investment decision. The following equation is then estimated:

$$ID_i = \alpha + \beta_1 RM_i + \beta_2 C_i + \beta_3 X_i' + \varepsilon_i \tag{17}$$

Where ID_i is the investment decision, RM_i is the risk match between the fund and the respondents risk preference, C_i is the confidence level of the respondent, and X_i' are other characteristics influencing the investment decision. The risk match is calculated as follows:

$$RM_i = |R_i^* - RS_i| + 1 \tag{18}$$

Where RS_i is the outcome of the risk staircase on a 1 to 7 scale (7 being very risk seeking, and 1 being very risk averse). The risk match is a variable on a 1 to 7 scale, where 1 is a perfect match, and 7 is not a match at all. The results are presented in Table XIV (next page). As can be seen, only in estimation 2 the coefficient for confidence is significant. In the other estimations the coefficient is not significant, and in 3 and 4 the sign is even negative. A possible explanation could be that the confidence level used in this estimation is not based on the confidence of respondents over their risk perception overall, but only on their risk perception on two types of risks (spread and return). But to really draw conclusions on this topic, further research is necessary.

Table XIV Result investment decision

| | Dependent variable | | | |
| | ID_i | | | |
	1	2	3	4
c	0.437	2.103***	0.413	0.018
Match	-0.203	-0.259*	-0.231*	-0.216*
Confidence	0.525	0.558*	-0.004	-0.038
Age		-0.508***	-0.110	
Experience with mutual funds		0.058		
Useful			0.579***	0.382**
Positive feeling			0.361**	0.604***
R^2	0.080	0.153	0.348	0.345
F-statistic	3.977**	4.060***	9.498***	11.850***
White test statistic	10.639*	19.894	17.529	9.043
Breusch-Godfrey statistic	0.343	1.300	0.675	0.639

All variables are taken in logs, in order to correct for the distribution of the residuals. The standard errors are HAC standard errors. *Reject H_0 at a 10% significance level. ** Reject H_0 at a 5% significance level. *** Reject H_0 at a 1% significance level.