

PSYCHOMETRIC RISK QUESTIONNAIRE

Due diligence - October 2016



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2. INTRODUCTION

2.1 BACKGROUND TO THE RISK SUITABILITY

In March 2011 the Financial Services Authority (FSA) issued guidance on assessing customer risk and the suitability of investment recommendations in a paper entitled "Assessing Suitability: Establishing the risk a customer is willing and able to take and making a suitable investment selection".

Whilst the duties of the FSA have now been transferred to the Financial Conduct Authority (FCA), the guidelines set out in the March 2011 document remain valid today.

This document aims to look in detail at EValue's standard risk questionnaire and show how it has been designed to be compliant with the FSA's guidance.

2.2 HIGH LEVEL REQUIREMENTS FOR RISK SUITABILITY

Risk profiling and asset allocation tools were seen in the guidance as a useful aid in discussions with clients help provide structure and consistency. The FSA made it clear that although these tools could be used, it was up to the adviser to ensure limitations were covered by the "know your customer" process.

High level requirements from the FCA are:

- Firms should have a robust process for assessing the risk a customer is prepared to take
- When a firm is using a tool, it should be fit for purpose and any limitations should be recognised and mitigated
- Any questions and answers used to establish the risk a customer is willing and able to take should have descriptions that are fair, clear and not misleading
- Firms should have a robust and flexible process for ensuring investment selections match a customer's investment objective and financial situation (including the risk they are prepared to take) as well as their knowledge and experience.

The EValue questionnaire is one part of the overall risk suitability process, providing advisers with a sensible starting point to a discussion on risk suitability.

3. ABOUT OUR RISK QUESTIONNAIRES

3.1 BRIEF HISTORY

Our first risk questionnaire was released in 2005 through a market leading adviser back office system. It used goal specific questions to create an attitude to risk and was one of the earliest versions of today's psychometric risk profiling. The current questionnaire was created in 2007 and has been updated in 2009, 2011 and 2014. We continue to monitor the results and further updates will follow if required.

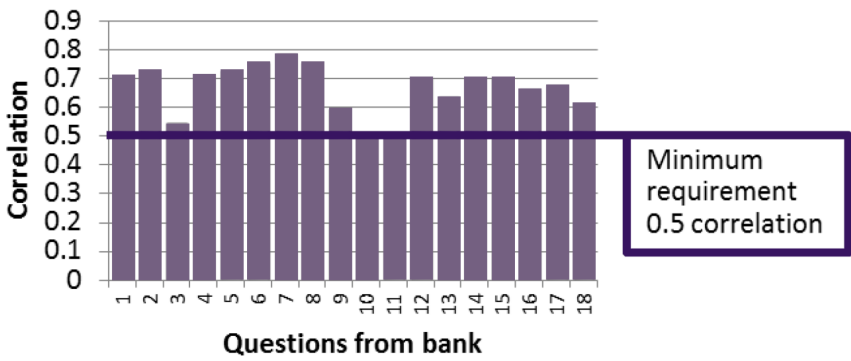
Since those early days we have updated and refined the questions through robust testing and further psychometric techniques. With an updated version released around every 2 years the risk questionnaire has now been used by high street banks, building societies and household name product providers.

We were also the first to create an income specific psychometric questionnaire following the Pensions Freedom changes in the UK in April 2015. This follows the same robust creation process as our standard growth risk profiling questionnaire and has been well received.

3.2 VALIDITY AND RELIABILITY

We measure a number of factors to check statistical reliability and validity. These are outlined below, with full details of the background analysis in the document "Psychometric analysis of questionnaire March 2014.pdf".

What is the check?	What is the outcome?										
Does it measure attitude to investment risk?	<p>We look at various factors to see if items such as age, gender, experience or existing assets are statistically significant within the results. 44% of the variance is indeed found to be attitude to investment risk, and a minimum level to safely consider this the main factor is 20%.</p> <div data-bbox="523 1464 1310 1906"> <p style="text-align: center;">Variance in results allocated to specific factors</p> <table border="1"> <caption>Variance in results allocated to specific factors</caption> <thead> <tr> <th>Factor</th> <th>Variance (%)</th> </tr> </thead> <tbody> <tr> <td>Attitude to risk</td> <td>44%</td> </tr> <tr> <td>Other factor</td> <td>~8%</td> </tr> <tr> <td>Other factor</td> <td>~6%</td> </tr> <tr> <td>Other factor</td> <td>~2%</td> </tr> </tbody> </table> </div>	Factor	Variance (%)	Attitude to risk	44%	Other factor	~8%	Other factor	~6%	Other factor	~2%
Factor	Variance (%)										
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Other factor	~8%										
Other factor	~6%										
Other factor	~2%										

What is the check?	What is the outcome?
<p>How reliable are the results?</p>	<p>We use Cronbach's alpha to measure the statistical reliability of the questionnaire, with a score of at least 0.8 required for a reliable outcome for users. Our reliability figures are as follows:</p> <p>10 questions - 92%</p> <p>7 questions - 92%</p> <p>5 questions - 91%</p> <p>Scores above 90% indicate a level of redundancy which would indicate fewer questions could still produce a sensible answer. However, in response to regulatory feedback (which didn't taken into account the type of methodology used) we have kept the questionnaire slightly longer than strictly statistically necessary to ensure that it is not too reliant on any one particular question. In addition, longer questionnaires increase other statistical scores such as the SEM (see below).</p>
<p>Does every question correlate to the overall result?</p>	<p style="text-align: center;">Variance in results allocated to specific factors</p>  <p>Each of the questions must have at least a 0.5 correlation to the overall score. This means that the questionnaire is improved by including the question over not including it.</p>
<p>How likely are the users to end up in the wrong category?</p>	<p>We use Standard Error of Measurement (SEM) which provides an indication of how much scores for people with the same attitude to risk might vary. It's expressed as points on a scale for each questionnaire. There is a less than 5% chance that a person's real score is more than 2 SEMs from their observed score, and 67% chance it's within 1 SEM.</p> <p>Our questionnaire has an SEM score from around 2.5 for the 5 risk profiles to just over 3 for the 10 risk profile.</p> <p>The SEM reduces with higher reliability but increases with greater score variance so the right balance has to be provided.</p>

3.2 EXPERT RESOURCE CREDENTIALS

We use expert resource in psychological and statistics to create and review our questionnaire. The questionnaire is set by our Chartered Psychologist who lectures and publishes on an international basis and has the following credentials:

- **Qualifications:** Masters Degree studies in psychology with thesis on test bias, B.A. psychology mathematics and philosophy
- **Membership of Professional Committees:** e.g. Standing Committee for Test Standards, British Psychological Society, Member, International Relations Standing Sub Committee of the Division of Occupational Psychology, British Psychological Society
- **Experience:** Principal Research Psychologist, Research Division and Deputy Director, Group R&D. Head of Test Development Unit (Saville and Holdsworth (UK) Ltd), Assistant Head of Psychometric Department (National Institute for Testing and Evaluation)
- **Publications:** Author of numerous publications and speaker at many conferences

4. MEETING THE SUITABILITY REQUIREMENTS

This section considers each of the key considerations in the risk suitability guidance and provides a response to how the EValue questionnaire is designed to meet those requirements

4.1 ENSURING QUESTIONS ARE UNDERSTOOD

4.1.1 Guidance requirements

“The possibility of customers misunderstanding the questions they are being asked could be exacerbated if the questions:

- are vague, use double negatives or complex language that the customer may not understand;
- are not suitable for use with the firm’s customer base, for example because they assume the customer has particular knowledge or experience such as a good level of financial knowledge or mathematical ability, and that the customer is comfortable in applying it; or
- are structured in a way that could invite different answers - for example, because they ask two questions in one and the customer might want to record a different answer to each sub-question.”

Source: FSA, FG11-05 Section 3.17

4.1.2 Meeting the guidance

Our questions have been designed and tested to be understood by customers. Only questions which can be shown to be understood and which successfully measure a customer’s attitude to risk have been included in our questionnaire.

In particular our questions:

- Are direct, with no double negatives
- Use simple language, without financial jargon
- Ask only one question at a time
- Can be answered by customers who have not invested before
- Do not require customers to have financial or mathematical knowledge - for example, we have no questions with percentages, and options provided are designed to be as simple as possible.
- Are designed and tested to be appropriate to all ages and levels of experience, with minimal differences between male and female responses
- Specifically assess attitude to investment risk, with each question related to investments rather than other areas of personal attitudes.

4.2 SENSITIVITY TO RESULTS

4.2.1 Guidance requirements

“The number of questions firms ask their customers can vary significantly. The fewer the questions – coupled with a possibility of misinterpreting an answer – the greater the probability is of making an inaccurate assessment. We have seen cases where the resulting risk category is effectively determined by the answer to one question.”

Source: FSA, FG11-05 Section 3.18

4.2.2 Meeting the guidance

We statistically check the reliability of the questionnaire to ensure that there are sufficient questions to make the questionnaire valid, but not so many that the experience for the customer is degraded. A general rule of thumb is that the number of questions should be between 1.5 and 2 times the number of risk categories. All our questionnaires are over 93% reliable.

In addition, with any questionnaire - no matter how many questions are included - there can be a situation where a change to just one question can switch the result's risk category. This occurs where the previous set of answers lies on a scoring border. To mitigate this risk we recommend the display of the location in the risk scale of the result, so that it can be seen clearly whether an investor is on the border between risk categories. Where this situation occurs, it should be discussed with the customer and included as part of the audit trail for the risk profile.

4.3 NON-COMMITTAL MIDDLE ANSWERS

4.3.1 Guidance requirements

“We are also concerned that some questionnaires invite a customer to select the option with which they most agree with. Options that are vague could be interpreted by customers and firms in different ways leading to poor outcomes. For example, where questionnaires use non-committal ‘middle’ answers, customers could interpret these as having a neutral effect (effectively a non-answer): these could be selected by customers to reflect a lack of understanding, a lack of investment experience or may simply indicate that they do not agree with any of the answer options.”

Source: FSA, FG11-05 Section 3.19

4.3.2 Meeting the guidance

The issue being described here is where the middle answer using a scale of agreeing to disagreeing could be interpreted incorrectly, or used where the customer doesn't want to answer or doesn't have an answer. Examples of non-committal middle answers are "Neither agree nor disagree", "Not sure" or "Uncertain". All of these options could be used where the customer decides not to answer the question.

Therefore we use a middle option of "In between" because this represents a point on the scale between strongly agreeing and strongly disagreeing, and provides a commitment to the answer.

4.4 CAPACITY FOR LOSS AND OBJECTIVE

4.4.1 Guidance requirements

"We have seen instances where information such as the customer's attitude to risk and their capacity for loss is gathered together along with information related to the term of the investment or the age of the customer and conflated into a single output.

By bundling information on different factors together, the value of each distinct piece of information is potentially lost because arbitrary weightings are applied to different factors which may negate a preference or need. This can result in output that does not accurately reflect the trade-off decisions that a customer is willing or able to take. If such an approach is used, the tool, or wider suitability assessment process, needs to be capable of accounting adequately for each of the different pieces of information."

Source: FSA, FG11-05 Section 3.19

4.4.2 Meeting the guidance

We have always believed that attitude to risk, capacity for risk and objectives should be dealt with separately and in discussion with the customer, so that the adviser uses their professional knowledge and experience to provide investment advice suitable for the customer and their objectives.

Therefore, the attitude to risk questionnaire does not ask for the term of the objective, nor does it cover the capacity for loss for a customer. Both these areas should be considered separately as part of the overall process. Note that there could be a different risk profile for each customer objective. An attitude to risk questionnaire should ideally not contain a term-based question as this would make it specific to one objective.

4.5 RISK DESCRIPTIONS

4.5.1 Guidance requirements

"Descriptions of risk can be difficult for a customer to understand if, in particular:

- Descriptions or illustrations do not clearly quantify the level of risk. For example, using words such as 'some' to explain how much is typically invested in a particular type of asset or product type can be interpreted differently by firms and customers.
- The description of the investment strategy (including reference to the typical assets used within a category) is inconsistent with most customers' understanding of the risk posed by the category description. For example, one firm's customer research indicated that their customers thought the risks posed by certain investments (specifically, exposure to UK and overseas shares) were higher than they would have anticipated from a category using the phrase 'cautious'.
- Statements within descriptions are not balanced or use language that is misleading, judgemental, emotive or not objective (for example, using text such as 'you are a sensible investor'). Language such as this can inappropriately influence rather than validate the level of investment risk the customer is willing to take.
- A number or name of a category is provided to the customer with no explanations of what it is intended to reflect.
- Descriptions or illustrations contain technical jargon that the customer may not understand, or are not fairly balanced or reflective of the risk-reward trade-off."

Source: FSA, FG11-05 Section 3.29

4.5.2 Meeting the guidance

Our risk descriptions have been designed to be part of the communication about the level of risk a customer may experience. There should be other methods provided in addition such as forecasts or example investments to give a more thorough picture of the risk that could be experienced.

- Quantify the level of risk - this is supported by EValue with additional communication methods such as individual forecasts showing the potential range of returns. Whilst risk descriptions can give a high level idea of the level of risk, to quantify the risk properly a client's situation, objectives and needs should be taken into account.
- Match the level of risk with the category - EValue provide consistent asset allocations, which are designed to meet the requirements for each risk category and across different terms of investment. The descriptions are based on the type of people who are expected to be within each category.

- Balanced language – we avoid the use of emotive words within our descriptions, looking instead at the type of risk / return trade-off and typical investments.
- Use a description – advisers should provide more than just the descriptions to give a more thorough understanding to their clients. Different methods of communication help improve the chance that a customer will understand the risk involved.
- Balance between the upside and downside - this is provided in our descriptions, which have been reviewed by the Plain English Campaign to ensure there is simple language without jargon.

4.6 WIDTH OF RISK CATEGORIES

Although not strictly part of the risk questionnaire itself, the potential investment solutions via either asset allocation or fund propositions is another important part of the overall risk suitability process. Therefore we have included how EValue can support this area in this document.

4.6.1 Guidance requirements

“The way in which some firms structure their risk categories can make it difficult for customers to understand the investment risk to which they are committing. Structures that we have concerns with include:

- Extremely wide categories that capture customers across a broad spectrum of views. Firms should be aware of this issue and guard against investment selections that technically fit within the risk category but do not meet the specific needs of the customer. For example, where the risk a customer is willing and able to take is at the low end of a wide category but the investment selection is reflective of the high end of the category this is likely to lead to unsuitability.
- A gap between the risk profiles of different categories. For example, where there is a significant difference in the proportion that can be invested in equities for consecutive risk categories, this may create large jumps in the risk taken.”

Source: FSA, FG11-05 Section 3.30

4.6.2 Meeting the guidance

To meet the guidance on having sufficiently distinctive risk categories and smooth transitions between them, we have always used the following principles:

- A minimum of 5 risk profiles to ensure there is enough distinction between categories
- Displaying the location of the risk result within the risk category for both the customer and fund risk profiles so that the investment choices made can be shown to match the customer’s risk profile.
- A methodology for creating asset allocations which creates a gradual move in asset allocation both between risk categories and across terms, ensuring there are no large jumps in risk between categories.

3. LIMITATIONS OF THE QUESTIONNAIRE

As with all tools, there are some limitations of what can be expected from the results of the risk questionnaire. The following table sets out the known limitations and the mitigating action that can be taken by firms using it.

Limitation	Mitigation
It is a starting point for the discussion only	The questionnaire should be used in conjunction with other risk tools, considering capacity, existing investments, objectives and knowledge and experience. It should not be relied upon as the sole calculation for risk suitability.
It is designed for investors who are prepared to take at least some capital risk. Risk levels start at "Little risk" not "no market risk".	Ensure a "No market risk" level is available which can be selected either before the questionnaire is used or following further risk discussions with the customer.
It considers only attitude to investment risk and not capacity for risk.	Capacity for risk, which includes both the capacity for capital loss and the risk of not achieving targets, should be considered separately. A set of additional questions can help to drive and document the discussion.
The questionnaire does not take into account other needs, objectives or circumstances	These should be discussed separately and considered before choosing the final risk profile. The forecasts provided by EValue can help this discussion process by providing potential outcomes based on the customer's individual circumstances.
It doesn't take into account the time horizon of objectives	The questionnaire is designed to provide a customer's overall attitude to risk, and not one specific to any particular objective. The client's risk profile for an objective can vary from their overall attitude to risk. Most importantly, the investment choices made should reflect the time horizon of those objectives.
The distribution of results will vary depending on where in the advice process the questionnaire is used.	For example, if used before any fact finding at the start, it could be used by investors who are not prepared to do any investing because they have no capacity and / or are not willing to take any risk at all.
The questionnaire is designed to be used without intervention or provision of information about risk	<p>Giving investors a guide to risk before answering the questionnaire could change the answers that are given. The questionnaire should be answered without intervention or help to get a truer picture, in the same way as giving a guide about behaviour and personality before answering a personality questionnaire would also affect the results.</p> <p>This does limit the customer being sent information about the risk profiling process or about what will happen to the results.</p>
A risk description on its own may not be sufficient for a customer to agree their attitude to risk.	Use different methods of communication to ensure that customers understand the impact of the level of risk both on their final objectives and their potential returns during the period of their investment. To support this, EValue provide stochastic forecasts to show the potential range of returns for each risk profile over different time horizons.

Limitation	Mitigation
The questions should be considered as a group working together to provide a result.	A single answer does not override the result of the whole questionnaire but inconsistent answers would require further discussion with the customer to ensure they fully understand what is being asked. Validation of inconsistent results can be added to the process to identify single responses which are out of line with the others.
The measurement is at a single point in time and will need to be re-assessed as circumstances change	A regular review should be carried out to ensure that the attitude to risk remains valid. Your process should ensure that the questionnaire is updated at a suitable review point, in particular if circumstances change.
The intended target audience for the questionnaire is for those who are looking to invest for a number of years.	Consider the customer's objectives and needs when identifying the attitude to risk. A shorter term outlook could affect the investment solution that is used.
The assessment has been carried out on customers being provided advice in the UK	Consider any differences between the UK market and your own customers, if any.

5.1 PRACTICAL STEPS FOR ADVISERS

Although not strictly part of the risk questionnaire itself, the potential investment solutions via either asset allocation or fund propositions is another important part of the overall risk suitability process. Therefore we have included how EValue can support this area in this document.

A practical checklist for advisers wishing to ensure they remain compliant is shown below.

- Ensure you have a complete suitability assessment and know your customer process
- Ensure you have a method to identify customers that are best suited to placing their money in cash deposits because they are unwilling or unable to accept the risk of loss of capital.
- Consider all types of risk for the product, not just the volatility or capital loss - e.g. inflation risk, lack of diversification or liquidity.
- Ensure management information on risk categories chosen is recorded and reviewed regularly.
- Consider knowledge and experience of customers in the choice of investments.
- Record reasons for changing risk category after discussion with the customer.
- Be able to explain the level of risk to the client using different communication methods.
- Ensure the funds selected match the risk profile required and are suitable given all other aspects of a customer's investment objectives and financial situation.
- Ensure your risk questionnaire has been statistically validated.

- Ensure you understand the limitations of the questionnaire and how these are mitigated within the suitability assessment process you have set up.
- Ensure you understand how your risk profiling solution works.
- Have a clear process to review and, if necessary, update a customer's risk assessment.

6. METHODOLOGY FOR QUESTIONNAIRE CREATION

In the suitability, paper the FSA did not consider the methodology for creating psychometric questionnaires. In this section, we set out the process we use to create our robust questionnaire.

6.1 GOING BEYOND THE REQUIREMENTS FOR RISK SUITABILITY GUIDANCE

The FSA did not look at the methodologies behind the psychometric risk questionnaires. We use a robust methodology created by a leading expert in psychometric testing to ensure that our clients have access to the best possible questionnaire.

In summary, the additional features that the EValue questionnaire uses are listed below:

- **Client specific risk scoring** - This sets EValue apart from the competition as we use a method that scores the questionnaire based on the type of person that is in each category, not by ranking them against other customers. This answers the question "What risk is the customer?" rather than "What risk is this customer compared to all the other people who have taken this questionnaire?". This means that the questionnaire works for any population of customers and that the result for each customer is not dependent on the results of other customers' responses.
- **Statistical checks** to ensure that the questionnaire is as robust as is scientifically possible, using methodologies which have been refined over the last 100 years of psychometric practice.
- **Review and maintain the questionnaire results** every 2 to 3 years to ensure that the results are still as expected and that the questions remain fit for purpose.

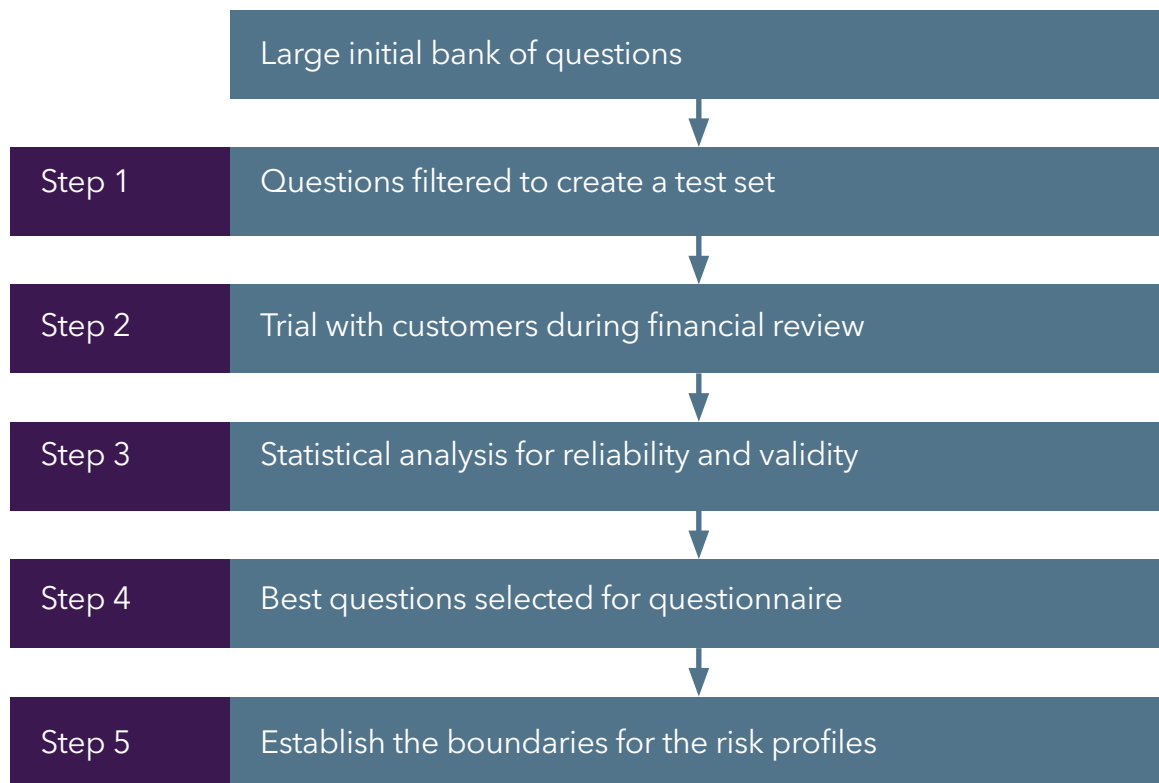
6.2 METHODOLOGY FOR CREATING THE QUESTIONNAIRE

EValue's standard risk questionnaire has been vigorously tested and validated by experts in occupational psychology and psychometric statistics. The questionnaire has been trialled with a large sample of investors and statistically tested to determine validity, reliability and accuracy.

There are a number of key stages we used to create our questionnaire:

Develop a suitable bank of questions

- Trial and research the questions with customers before inclusion in the questionnaire
- Assess the validity of the questions using statistical analysis
- Select the questions to use
- Assign scores to responses using independent expert groups
- Retest the questionnaire to ensure it meets statistical checks



6.2.1 Develop a suitable bank of questions

An initial bank of questions is created that is clear, easy-to-understand and uses different styles of questions. More questions developed than likely to be required to allow the less effective questions to be eliminated through testing. The questions developed avoided technical jargon and are chosen to be as unambiguous as possible. In addition, the content of the questions is chosen to be appropriate for the expected customers and assumed no prior investment knowledge.

A variety of types of question are used to assess attitude to investment risk. These questions' types include:

- Direct self-assessment – e.g. How willing are you to take risks?
- Emotional response to risk – e.g. How would you feel if your investment was at risk?
- Past behaviour – e.g. Have you taken risks with your investments in the past?
- Scenario – Would you choose an investment with substantial risk to your capital?

It is a combination of the different types of question that adds to the reliability of the questionnaire, which is why there are different styles of responses and they are not all “agree / disagree” style questions.

6.2.2 Trial and research the questions with customers before inclusion in the questionnaire

Before inclusion in the questionnaire, each question is tested across a range of investors to ensure a wide spread of responses. The trial also highlights any unanticipated ambiguity in the questions and responses.

The objective of the trial is to test how well the questions work in measuring attitude to risk and to determine the best questions to use in the final questionnaire.

6.2.3 Assess the validity of the questions using statistical analysis

Statistical tests are used to check the validity of the questions included in the questionnaire. The tests check that the questions sufficiently measure attitude to risk, are reliable questions, give suitably correlated results and less obvious questions work as well as direct questions. In addition, we check to ensure that each question adds to the reliability of the questionnaire by including it.

6.2.4 Select the questions to use

The length of the questionnaire needs the right balance between being long enough to obtain reliable results and short enough to ensure a good customer experience. Having a sufficiently large number of questions also provides a reduction in sensitivity to any one particular question.

Following the results from the trial, the individual questions to be included in the questionnaire are selected. The questions chosen were those which give a good consistent response pattern across customer groups and show a strong relationship to attitude to risk. In addition, we choose from across the different types of questions.

6.2.5 Assign scores to responses using independent expert groups

We use independent expert groups to assign scores to the responses to each question in the questionnaire according to the level of risk those questions represent to an identified scale of customer. The scores from this exercise are analysed by our qualified statisticians who provide the exact allocation of points to each response for each question. This is the same method as that used for setting exam pass marks. The customer's final risk score is the sum of all the points from all of the questions in the questionnaire compared to the risk boundaries set by the analysis.

6.2.6 Retest the questionnaire to ensure it meets statistical checks

The questionnaire is retested using statistical tests to ensure that the quality of the questionnaire is good and that the final questions selected result in a good indication of an individual's attitude to investment risk.

6.3 VALIDATION OF THE QUESTIONS USED

The validity of a questionnaire is the extent to which it measures what it is intended to measure - in this case an individual's attitude to risk.

Statistical tests, which answer the following key questions, are used to validate the questions included in the questionnaires:

Do the questions sufficiently measure attitude to risk?

- Do less obvious questions work as successfully as direct ones?
- Are the outcomes as expected for those with particular knowledge or skills?
- How reliable is each question?
- Are the results suitably correlated?

These are all covered in more detail in the sections below.

6.3.1 Do the questions sufficiently measure attitude to risk?

The questions are checked to ensure that they sufficiently measure attitude to risk as the main factor, rather than, for example, just relating to age or experience.

Questions to which people respond differently are more desirable to have in the questionnaire. If people tend to respond in the same way to a question then it would not be an effective way of distinguishing between different levels of attitude to risk.

The responses to the questionnaire of individuals holding different types of investments can be compared. On the whole, it would be expected that more adventurous people would be more likely to hold more risky investments. If the questionnaire is successfully measuring risk than those holding more risky investments should have, on average, more adventurous scores.

6.3.2 Do less obvious questions work as successfully as direct ones?

Some of the questions in the questionnaire may ask directly about attitude to risk. However, other questions may assess different but related matters such as an individual's emotional response to risk or how they have behaved in the past regarding taking risk with investments or would behave in a hypothetical scenario. These questions have an indirect link to the individual's attitude to risk.

In order to show that both direct and indirect questions measure attitude to risk, the direct questions are compared with the less direct ones. If the results of the statistical checks prove that there is a strong relationship between the two sets of questions then it shows that they are measuring the same factor. This allows the broader range of question types as described above to be used in the questionnaire which is likely to result in a better measurement of the individual's attitude to risk.

However, care should be taken so that no individual question can be interpreted as exactly determining a risk level. A combination of questions needs to be used to give an accurate measure of risk.

6.3.3 Are the outcomes as expected for those with particular knowledge or skills?

The questions are validated to ensure that the responses obtained from a specific group of individuals reflect any specialist knowledge or skills they may have. Demographic data, such as gender, age, ethnic origin, education and salary captured with the trial responses, allow questions to be assessed for each group of investors individually. Final scores for members of different groups can be compared. The analysis shows whether there are any differences in the response pattern to questions for people from different groups who have the same overall risk profile.

Each question can be looked at individually and any significant differences discussed. For some questions it can be shown that there is a clear difference in responses due to the individual's gender, which are then removed from the final selection.

6.3.4 How reliable is each question?

Where a set of questions are all measuring the same thing, in this case attitude to risk, it would be expected that a single factor would be behind all of the responses to the question. The questions can therefore be validated by carrying out a statistical check to ensure that there is good consistency across all the questions in measuring attitude to risk.

The higher the level of reliability in the questions the more accurately an individual's final score can be determined and is therefore unlikely to change on the basis of more questions.

6.3.5 Are the results suitably correlated?

The questions are validated to ensure that there is a close link between the score from an individual question and the total score from the remaining questions in the questionnaire. This indicates the extent to which an individual question measures what is being measured by all the questions as a whole, in this case attitude to risk.

6.3.6 Other checks

As well as carrying out statistical checks, the bank of questions available is reviewed to ensure suitability for expected customers. That is:

- any ambiguities are removed to reduce the risk of customers interpreting questions differently
- the content of the questions should be linked to the expected customers
- the questions should be clear and easy to understand
- the questions should not contain any technical jargon

APPENDIX - 2014 QUESTIONNAIRE UPDATE

A review of the questionnaire was undertaken in 2014 and an updated questionnaire was released following the review. The review looked at the following areas:

1. A statistical analysis of responses to ensure that all questions are working as intended. This validates the continued use of the questions, even if they look like they ask the same question over and over, the stats show them to be working.
2. An update to questions in response to industry and regulatory feedback. The changes in this update have mainly fallen into this category with the softening of any response that could be considered a “knockout” question.
3. An analysis of the responses to make sure that they are differentiating between the different risk levels. This led to the combining of two cautious responses on one question in this update as they had been shown not to be differentiating and combining the two leads to a statistically better questionnaire (albeit only very slightly).

The following sections detail the 2014 questionnaire, which questions are included in the 5, 7 and 10 risk versions and details of the changes that have been made to the questions and answers.

APPENDIX - QUESTIONS IN THE 2014 QUESTIONNAIRE UPDATE

The following questions and answers are included within the EValue 2014 questionnaire in the 10 risk version.

1. I would enjoy exploring investment opportunities for my money.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

2. I would go for the best possible return even if there were risk involved.

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never

3. How would you describe your typical attitude when making important financial decisions?

- a. Very adventurous
- b. Fairly adventurous
- c. Average
- d. Fairly cautious
- e. Very cautious

4. If I had money invested in shares I would be nervous about the stock market falling in the short term.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

5. What amount of risk do you feel you have taken with your past financial decisions?

- a. Very Large
- b. Large
- c. Medium
- d. Small
- e. Very small

6. To reach my financial goal I prefer an investment which is safe and grows slowly but steadily, even if it means lower growth overall.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

7. When I consider investments that have an element of risk I feel quite anxious.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

8. Imagine that six months after making an investment the financial markets start to perform badly. In line with this, your own investment goes down by a significant amount. What would your reaction be?

- a. Transfer your money to a more secure investment product to reduce the risk of further losses
- b. Monitor the investment and wait to see if it improves
- c. Invest more funds to take advantage of the lower price, expecting future growth

9. I am looking for high investment growth. I am willing to accept the possibility of greater losses to achieve this.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

10. I usually feel confident where money is concerned.

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

11. If you had money to invest, how much would you be willing to place in an investment with possible high returns but a similar chance of losing some of your money?

- a. All of it
- b. More than half
- c. Half
- d. Less than half
- e. Very little, if any

12. How do you think that a friend who knows you well would describe your attitude to taking financial risks?

- a. Daring
- b. Sometimes daring
- c. A thoughtful risk taker
- d. Careful
- e. Very cautious and risk averse

13. If you had spare funds to invest, would you choose a risky investment for the excitement of seeing how it would perform?

- a. Definitely
- b. Very likely
- c. Possibly
- d. Unlikely
- e. Very unlikely

14. If you had picked an investment with potential for large gains but also the risk of large losses how would you feel:

- a. Panicked and very uncomfortable
- b. Quite uneasy
- c. A little concerned
- d. Accepting of the possible highs and lows
- e. Excited by the potential for gain

15. Imagine that you have some money to invest and a choice of two investment products, which option would you choose?

- a. A product with a low average annual return but almost no risk of loss of the initial investment
- b. A product with a higher average annual return but some risk of losing part of the initial investment
- c. A mixture of the two products

16. I would prefer small certain gains to large uncertain ones

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

I want my investment money to be safe even if it means lower returns

- a. I strongly agree with this statement
- b. I tend to agree with this statement
- c. In between
- d. I tend to disagree with this statement
- e. I strongly disagree with this statement

APPENDIX - QUESTIONS IN THE 5, 7 AND 10 RISK QUESTIONNAIRES

The following table shows the questions used in the 2014 version of the 5, 7 and 10 risk questionnaires and their position within the respective questionnaires.

Question	# in 10 Risk	# in 7 Risk	# in 5 Risk
I would enjoy exploring investment opportunities for my money	1	1	1
I would go for the best possible return even if there were risk involved.	2	2	2
How would you describe your typical attitude when making important financial decisions?	3	3	3
If I had money invested in shares I would be nervous about the stock market falling in the short term.	4	n/a	n/a
What amount of risk do you feel you have taken with your past financial decisions?	5	4	4
To reach my financial goal I prefer an investment which is safe and grows slowly but steadily, even if it means lower growth overall.	6	5	5
When I consider investments that have an element of risk I feel quite anxious.	7	6	n/a
Imagine that six months after making an investment the financial markets start to perform badly. In line with this, your own investment goes down by a significant amount. What would your reaction be?	8	7	n/a
I am looking for high investment growth. I am willing to accept the possibility of greater losses to achieve this.	9	8	6
I usually feel confident where money is concerned.	10	n/a	n/a
If you had money to invest, how much would you be willing to place in an investment with possible high returns but a similar chance of losing some of your money?	11	9	7
How do you think that a friend who knows you well would describe your attitude to taking financial risks?	12	10	8
If you had spare funds to invest, would you choose a risky investment for the excitement of seeing how it would perform?	13	n/a	n/a
If you had picked an investment with potential for large gains but also the risk of large losses how would you feel:	14	11	9
Imagine that you have some money to invest and a choice of two investment products, which option would you choose?	15	12	10

Question	# in 10 Risk	# in 7 Risk	# in 5 Risk
I would prefer small certain gains to large uncertain ones	16	13	11
When considering a major financial decision which statement BEST describes the way you think about the possible losses or the possible gains?	17	14	12
I want my investment money to be safe even if it means lower returns	18	15	13

APPENDIX - CHANGES TO QUESTIONS AND ANSWERS SINCE 2011

The following table details the changes made to the questions and answers. References to FSA feedback relate to generic feedback from the FSA to the industry rather than specific feedback to EValue on this questionnaire. The FSA feedback was made before it was replaced by the FCA.

New Number	# in 10 Risk
1	<p>The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.</p> <p>The word 'would' added to the question to address FSA concern that it would not be relevant for people who had not previously had investments.</p>
2	The word 'was' changed to 'were' in the question.
3	The words 'compared to other people' dropped due to feedback from users that this was confusing and causing people to find it difficult to answer. (2014 update)
4	No change made
5	In the question the words 'compared to other people' dropped and the words 'have you taken' changed to 'do you feel you have taken'. (2014 update)
6	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.
7	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.
8	<p>Option 1 removed from the answers leaving 3 options. (2014 update)</p> <p>The phrase was 'goes down by 20%' was edited to remove the percentage to simplify the question.</p>
9	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.
10	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.
11	<p>The phrase 'an equal element of risk' replaced by 'a similar chance of losing some of your money'. (2014 update)</p> <p>The question was rewritten to provide simpler wording and to address issues faced by users who did not have a sum to invest in answering the question. The previous question was:</p> <p>"An investment that has the potential to make a lot of money will usually also have a greater risk of losing money. How much of the money that you have to invest would you be willing to place in an investment with potential high returns but with an equal element of risk?"</p> <p>This was updated to:</p> <p>"If you had money to invest, how much would you be willing to place in an investment with an equal element of risk?"</p>

New Number	# in 10 Risk
12	The phrase 'would a close friend' changed to 'do you think that a friend who knows you well would'. This was in response to feedback from users that this question was found difficult to answer by some people. This difficulty mainly related to people who said that they don't discuss their finances with their friends therefore they felt they couldn't answer the question. The change is intended to make it easier for people to see it as a hypothetical question rather than treating it too literally. (2014 update)
13	No change.
14	The question was changed from first person to second person (I to you)
15	'A product with' inserted at beginning of option text for a and b. (2014 update) The answer option c changed from 'A mixture of the above' to 'A mixture of the two products'. (2014 update) Percentages removed to address FSA concern that this made the question too complex for some respondents. Previous content was: a. An annual average return of 4% and minimal risk of loss of the initial investment. b. An annual average return of 9% but a potential risk of up to 10% loss in any one year
16	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.
17	In the question the word 'most' replaced with 'best'. The middle answer option changed - it was previously 'I carefully consider both the possible gains and losses' and has been updated to be 'I think about both the possible gains and losses'. The previous answer was endorsed by many people and could be interpreted as thinking through the investment rather than the emotional response to what you have done.
18	The middle answer option changed from 'I am uncertain' to 'in between'. This addresses FSA concern regarding the uncertainty of the middle option.