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# Morningstar's Risk Tolerance Questionnaire Methodology

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## Morningstar's Experience in Developing Risk Tolerance Questionnaires

Morningstar Investment Management unites the strengths of Morningstar's independent investment research, data, and tools with over three decades of investment experience to help firms empower investors to meet their financial goals. Founded in 1977, Ibbotson, a Morningstar company, first started developing risk-profiling tools for its clients in the mid-1990s and today has helped us become a leading authority on asset allocation, manager selection and portfolio construction services.

True to our academic roots, we have consulted with leading scholars in the behavioural finance field such as Nobel Laureate Daniel Kahneman and Richard Thaler when developing our risk-tolerance questionnaire methodology and incorporating many best-practices of the field.

Morningstar's commitment to ongoing research helps ensure that our core competencies as the thought leader in capital market expectations, asset allocation, asset allocation implementation, individual investor advice, and the conversion of theory into practice is maintained in today's both dynamic and highly competitive field.

Over the years, Morningstar Investment Management has published over one hundred articles. In 2014, a study of daily responses of more than 25,000 individual investors to a Morningstar risk tolerance questionnaire (RTQ) from 2006 to 2013 evidenced the time-varying nature of risk aversion, reinforcing our focus on loss aversion and ability to stay the course.

Morningstar launched our United Kingdom RTQ in 2001. After the FCA (then FSA) published their thematic review on Assessing Suitability in 2011, the questionnaire was reviewed and upgraded based on the feedback specific to our questionnaire. Since then, Morningstar has implemented a process to regularly review our RTQ. This latest upgrade incorporates feedback from our client base and analysis from our research team, whilst retaining the feedback previously received from the FCA.

Morningstar's risk profiling tools have also been approved by the American Financial Industry Regulatory Authority (FINRA) and are used by many of the largest asset managers, insurance companies, banks, broker dealers, and retirement plan providers in the U.S., Europe, and Asia.

### Usage Statistics

With the continual improvement of the RTQ, we have a regular run rate of 1000 profiles per month, the outcomes of these questionnaires follow an expected distribution curve and the adviser overwrite is less than 1% (Based on online surveys where we capture this information).

### Market Testing

As part of our review and user acceptance processes we tested the questionnaire with a sample of advisers and their client base, to ensure the questionnaire was easy to understand, met the adviser's needs and profiled as expected.

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## Key Features of the Morningstar RTQ

### Assessing Risk Tolerance and Risk Capacity

The primary objective of Morningstar's RTQ and scoring system is to identify the investor's willingness to accept various levels of risk via responses to risk-tolerance questions and to determine the investor's capacity to accept risk via responses to time horizon questions, and ultimately to direct investors to the appropriate portfolios.

An investor's time horizon is a key factor of his or her capacity to bear investment risk. Time horizon is a necessary constraining variable, especially for investors with a short time horizon. An investor who has a short time to accumulate portfolio wealth may not be able to recoup losses that a risky portfolio may experience. Therefore, it is necessary to restrict an investor with a short time horizon from investing in a portfolio that has a high probability of experiencing short-term declines. If a client has a longer time horizon, he or she can afford a higher level of investment risk. The longer the money is invested, the higher the chance to recover from market downturns.

Investor risk tolerance is another essential factor in determining what portfolio is appropriate for the investor. Risk tolerance is a measure of the investor's attitudes and perceptions towards the uncertainties associated with investing. A risk-averse investor requires greater certainty in portfolio returns, while a risk-tolerant investor is willing to accept higher volatility of returns in exchange for potentially higher average returns. A risk-averse investor becomes anxious when his or her portfolio declines in value by even a small percentage. A risk-tolerant investor is able to endure market fluctuations and to focus on the end objective.

Morningstar focuses on the following concepts when identifying an investor's willingness to accept risk:

► **Risk-Return Trade-off (Evaluating a Range of Returns)**

High return is desired by any investor, but it comes at a price-uncertainty of future returns. The higher the return an investor desires, the higher risk they must take. This concept summarises the willingness of an investor to endure increasing fluctuations in the portfolio value in exchange for the possibility to gain additional units of return.

► **Loss Aversion**

Investors tend to feel a greater psychological pain from losing than they do joy from gaining. This concept is called loss aversion. Loss aversion measures the unwillingness of an investor to experience potential losses.

► **Ability to Stay the Course**

Short-term downfalls in the market are likely to occur during anyone's investment time frame. These downturns make it difficult for many investors to cope and could be discouraging to stay invested. Over the short term, people can "see" downward trends in the performance of their portfolios, and feel compelled to switch policies. Some investors are particularly prone to regret losses that have resulted from their choice of investment policy and may not be able to stay the course when those losses occur. A financial advisor should be aware of this tendency of investors to overreact to single events and should recommend a policy that investors are likely to adhere to.

**Levering the Heritage of Morningstar Investment Management's Expertise in Capital Market Assumptions**

The RTQ is unique in that it leverages Morningstar's expertise in building capital market assumptions. Rooted in Roger G. Ibbotson and Rex Sinquefeld's seminal research on Stocks, Bond, Bills and Inflation® in the mid-1970s—which led Roger Ibbotson to the founding of Ibbotson Associates in 1977—Morningstar has a long history of analysing the risk and return characteristics of different asset classes. The risk and return estimates referenced in the questionnaire are based on Morningstar's capital market assumptions, and are tied directly to the asset allocation of our clients' portfolios. The direct link between the questionnaire and the suggested portfolios ensures consistency between the adviser's investment recommendation and the investor's risk profile.

**Plain English**

The Morningstar questionnaire and risk descriptions hold the Plain English Crystal Mark, which means the questionnaire is as clear as possible for the intended reader. It uses plain English, clearly explains technical terms with our use of helpful tips and is presented with clear, helpful headings and an easy to read format.

### **Review Process**

Morningstar follows a rigorous internal review process to sign off for the Risk Profile Questionnaire and Risk Descriptions. Throughout the process of building out the questionnaire, the Morningstar's Investment Management consultants work closely with both our Compliance and our Adviser Software Management team to ensure that the RTQ meets the needs of advisers and investors, providing a robust solution and meeting compliance needs. The RTQ is put through an assessment by Morningstar's Global Investment Committee and is formally approved by the Morningstar Investment Management Europe Portfolio Committee.

The RTQ is subject to annual review.

### **A Multi-Dimensional Scoring System**

Morningstar designed the questionnaire scoring system to match investors to a portfolio based on their responses from the RTQ.

Like the questionnaire itself, the scoring system is divided into two distinct sections: time horizon and the risk aversion score. Each section is scored separately, and then combined to form a total score. Morningstar uses the total score to match to an asset allocation. The sections below discuss this process.

#### **► Time Frame Score**

The time horizon portion of the scoring is taken from questions 3 to 5. The score on these questions determines the time horizon level.

The time horizon level is used to assign various time horizon factors. The time horizon restricts the investor's access to certain portfolios based on the investor's need for liquidity. Investors that need to withdraw large sums from their portfolios within a certain period of time are not given access to the more risky portfolios. This protects investors from the risk of locking needed funds in a volatile portfolio and withdrawing when that portfolio is experiencing losses.

Within each time horizon level, Morningstar allows an investor's risk tolerance to determine the appropriate asset allocation. If an investor's risk tolerance suggests a portfolio that is restricted (due to the time horizon level), a more appropriate portfolio is assigned to that investor's specific time horizon level. This process allows cautious investors with short time horizons to score into a portfolio matched to their risk tolerance while at the same time protecting adventurous investors with short time horizons from excess risks. This is consistent with Morningstar's belief that individuals with shorter-term horizons should hold portfolios that are more cautious.

► **Attitude to Risk Score**

The risk aversion portion of the scoring is taken from questions 6 through 12. The score on these questions determines the risk aversion level. Where the primary purpose of the time horizon score is to find the investors ability to take on risk, the main goal of the risk aversion portion of the questionnaire is to capture how much risk the investor is willing to take.

The risk aversion level is comprised of many different concepts uncovered by behavioural economists in recent decades, including loss aversion, risk-reward trade-off, and the ability to stay the course. An investor who feels uncomfortable with extreme volatility or the possibility of large losses to their portfolio is placed in a more cautious option, while an investor who is willing to accept greater risk is placed in a more adventurous option.

The scoring has been structured so that a single anomalous response does not change the final result.

### Risk Scoring:

To calculate the risk score of the investor their investment Attitude to Risk and Time Frame scores will need to be factored together.

Questions 1 & 2 are not scored. These are intended to allow advisers to record this information within a single document and place the results in context. Furthermore, if the response to Question 2 indicates that the investor cannot tolerate a fall in the value of their money and therefore has no capacity for loss, the RTQ result will be that there is no suitable investment solution.

The table below provides the scoring for each answer

#### Time Frame Score:

Question	A	B	C	D	E	Score
3	0	6	10	15	20	
4	0	2	5	7	10	
5	10	7	5	2	0	
<b>Total</b>						

#### Attitude to Risk Score:

Question	A	B	C	D	E	Score
6	0	4	7	10	14	
7	0	4	7	10	14	
8	0	4	7	10	14	
9	15	10	5	0	—	
10	0	4	7	10	14	
11	0	5	10	15	—	
12	0	4	7	10	14	
<b>Total</b>						

An investor with a time horizon score of less than 2 years may not be able to bear the risk associated with any of the investment options. The adviser may recommend a zero risk investment to the investor.

Active, Passive, & Income Portfolios (Attitude to Risk Score)	Time Frame Scores			
	0 to 5	6 to 9	10 to 14	15 to 40
0 to 15	Not Suitable	Cautious	Cautious	Cautious
16 to 35	Not Suitable	Cautious	Moderately Cautious	Moderately Cautious
36 to 55	Not Suitable	Cautious	Moderate	Moderate
56 to 85	Not Suitable	Cautious	Moderate	Moderately Adventurous
86 to 100	Not Suitable	Cautious	Moderate	Adventurous



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