

Schwab Intelligent Portfolios™ Investor Profile Questionnaire White Paper

Key Points

- Before making any investing decisions on behalf of a client, it is important to understand an investor's profile, including individual circumstances and tolerance for risk.
- As part of a paperless, online enrollment process, Schwab Intelligent Portfolios™ includes an Investor Profile Questionnaire (IPQ) that asks clients a short series of questions to determine whether a more conservative or more aggressive portfolio is appropriate for their situation.
- The IPQ is designed to enhance traditional risk tolerance questionnaires by including behavioral questions that assess a client's Risk Willingness in addition to factual questions about Risk Capacity.

Introduction

Proper asset allocation can improve the likelihood that investors meet their investment goals. Schwab Intelligent Portfolios offers a range of portfolios to suit various goals, financial situations, constraints and preferences. The Investor Profile Questionnaire (IPQ) helps ensure that investors are guided to choose the most appropriate portfolio based on their responses.

The Schwab Center for Financial Research developed the IPQ and related questions for the account opening process based on rigorous research, considering both objective (factual) and subjective (behavioral) information that investors provide. This white paper describes the methodology behind the IPQ and how responses are used to calculate risk scores and identify appropriate portfolios for investors.

Investor Profile Questionnaire

The goal of the IPQ is to understand an investor's comprehensive profile. Traditional questionnaires generally focus only on an investor's risk tolerance, a method that may yield limited benefits because it ignores behavioral issues, among other factors.¹

The IPQ expands the scope of the traditional questionnaire by seeking insights into an investor's ability, or capacity, to take risk as well as their attitude toward risk and willingness to take it. The capacity to take risk is dependent on an investor's financial situation (income, wealth, etc.) while an investor's willingness to take risk is based on behavioral factors, or how investors actually tend to behave in practice rather than in theory.

The IPQ also includes questions, when applicable, that are designed to capture an investor's preference for Total Return or Income portfolios and the tax status of their account. If the account is taxable, the investor can indicate their preference of portfolios containing taxable bonds or municipal bonds.

Risk Capacity

Investors' risk capacity is based on information about their financial situation. That information can generally be obtained by asking specific objective questions, such as their length of time to retirement and investment goals.

Risk Willingness

Investors' willingness to accept risk is typically indicated by the level of volatility they're comfortable with and other factors. Details about investors' risk willingness can be obtained by asking questions related to behavioral tendencies, such as the action they may take after experiencing a significant investment loss or have taken in the past when faced with a significant investment loss.

An investor's risk capacity and risk willingness are generally independent of each other.

Design of Questions

The Schwab Center for Financial Research finalized a series of questions based on the following design criteria:

- a. Ensure that enough information is collected to identify an appropriate portfolio for each investor.
- b. Limit the number of questions to keep user interaction as simple and brief as possible.
- c. Use simple and straightforward questions. This allows investors to provide valid and clear responses without requiring any assistance from a professional.
- d. Avoid non-response choice limitations. Available responses for each question should cover all possible choices that investors could make.
- e. Personalize questions to improve the validity and consistency of investors' responses. To add personalization, the IPQ has a "self-learning" mechanism that automatically customizes subsequent questions and possible responses based on responses to questions that are answered earlier. There are two specific visible effects of this feature:
 - Conditional (or customized) Questions: Based on responses to earlier questions, the IPQ determines that some questions may not be relevant and in such cases, those questions are not asked. For example, investors in taxable accounts will have the option of enrolling in tax-loss harvesting but investors opening retirement accounts will not see this question as it is not relevant for their retirement accounts.
 - Personalized Responses: Based on the responses gathered up to a certain point, responses to later questions are customized. For example, instead of displaying a range of possible investment returns only in % terms, the IPQ uses the initial investment input provided by investors and then converts the range to an amount-based range as well. This helps address a widely documented cognitive bias that investors are able to better relate to returns expressed in amounts than in percent terms.
- f. Allow investors to override—within pre-defined bounds—the allocation suggested by Schwab Intelligent Portfolios. This enables investors to make minor adjustments to the suggested portfolio based on their specific goal.

- g. Ensure responses are consistent throughout the questionnaire. A number of business rules have been designed to validate responses and alert users of any inconsistencies.

Validating Responses

Research shows that it is essential for responses provided by investors to be consistent. Answering questions inconsistently or even answering one question incorrectly could have a significant impact on the recommended portfolio.²

The Schwab Center for Financial Research has developed a set of business rules to validate the consistency of responses. If inconsistencies are observed, investors could be contacted by a Schwab Intelligent Portfolios consultant to discuss their answers in more detail and potentially request a change depending on the level of inconsistency.

An example of an inconsistency is if an investor is 20 years old and indicates that they would like money for retirement in 13 years. In this scenario, the questionnaire would prompt the investor that they should consider altering their answer before proceeding.

Risk Scoring

The IPQ establishes two separate risk scores to help identify the most appropriate portfolio for an investor: Risk Capacity Score and Risk Willingness Score. The scores are calculated by assigning different weights to individual responses to questions.

The IPQ contains 15 questions:

- Five questions capture factual information to assess investors' risk capacity.
- Six questions collect information about investors' behavioral attitude toward risk. The responses help calculate an investor's risk willingness score.
- Four questions ask about the investor's age and product preferences, such as Total Return/Income or Muni/Taxable bonds. The responses aren't factored into an investor's risk score but help determine the appropriate set of portfolios.

Risk Scoring Methodology

When an investor answers a question, their choice will be assigned a numerical value. For answers that imply a higher level of risk willingness or capacity, a higher score will be assigned. For answers that imply a lower level of risk willingness or capacity, a lower score will be assigned. The scores for each risk dimension are used to map clients to a specific portfolio across the risk spectrum from conservative to aggressive.

Risk capacity related questions are important because they are entirely objective and provide meaningful scientific input. Historically, when designing a personal portfolio, financial advisors would often focus solely on risk capacity related questions in order to determine the appropriate level of risk an investor could accommodate.

Roszkowski, Davey, and Grable (2005) in "Insights from Psychology and Psychometrics on Measuring Risk Tolerance" indicate that combining risk-attitude (or behavior) related questions with objective questions will provide a more complete understanding of the investor.

By including risk willingness related questions, we feel the portfolio recommended to each investor will more closely capture the level of risk they are most comfortable with. The reason for this, simply put, is that humans are not machines. Investors have feelings and emotions that will undoubtedly impact their investment style. By addressing this early on and incorporating these subjective views into their risk score, we feel investors are more likely to choose and stay with the recommended portfolio.

Conclusion

The IPQ has been designed to include an understanding of both an investor's financial situation and their attitude toward risk. The IPQ assigns different weights to responses to a series of questions as part of the process of calculating a Risk Capacity Score and Risk Willingness Score.

The two scores are then used to identify an appropriate portfolio. It is important to note that some questions (such as age) are not scored because they are, by themselves, not considered to have significant impact on an investor's risk capacity or risk willingness. More specific information about the investor, such as their investment goals or the time-horizon, is instead used in the risk scoring calculations. Information about total liquid wealth or income is not included because the IPQ is goal-specific.

Combining appropriate educational text with the IPQ should provide investors with a powerful tool to select the most appropriate portfolio, which can improve the likelihood that investment goals are achieved.

1. Michael Pompian, *Behavioral Finance and Investor Types* (CFA Institute, Private Wealth Management, 2012).

2. Paul Bouchey, *Questionnaire Quest: New research shows that standard questionnaires designed to reveal investors' risk tolerance levels are often flawed or misleading*. (Financial Planning, July 2004).

Disclosures

Investing involves risk including loss of principal. The information here is for general informational purposes only and should not be considered an individualized recommendation or personalized investment advice. The type of investment strategies mentioned may not be suitable for everyone. Each investor needs to review a security transaction for his or her own particular situation.

(0315-1402)(0216-0559)
