



Risk tolerance questionnaire and scoring system

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ADVISORS

Different investors have different risk tolerances

Much of the difference stems from time horizon. That is, someone with a short investment time horizon is less able to withstand losses. The remainder of the difference is attributable to the individual's appetite for risk. Volatility can be nerve-wracking for many people, and they are more comfortable when they can avoid it. However, there is a relationship between risk and return. Investors need to recognize this risk/return trade-off. The following risk tolerance questionnaire is designed to measure an individual's ability (time horizon) and willingness (risk tolerance) to accept uncertainties in their investment's performance. The total score recommends which of five distinct risk profiles is most appropriate for the investor.

Time horizon

Question	Answer	Response	Score
1 When do you expect to begin withdrawing money from your investment account?	a. Less than 1 year.	a	0
	b. 1 to 2 years.	b	1
	c. 3 to 4 years.	c	3
	d. 5 to 7 years.	d	7
	e. 8 to 10 years.	e	9
	f. 11 years or more.	f	11
2 Once you begin withdrawing money from your investment account, how long do you expect the withdrawals to last?	a. I plan to take a lump-sum distribution.	a	0
	b. 1 to 4 years.	b	2
	c. 5 to 7 years.	c	4
	d. 8 to 10 years.	d	5
	e. 11 years or more.	e	6

Risk aversion

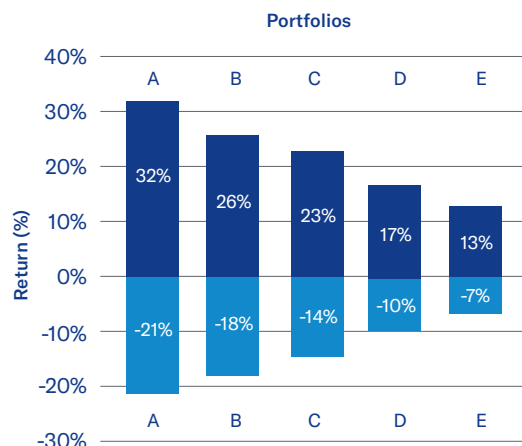
Question	Answer	Response	Score																								
<p>3 Which of the following choices best reflects your attitude toward inflation and risk?</p>	<p>a. My main goal is to avoid loss, even though I may only keep pace with inflation.</p> <p>b. My main goal is to earn slightly more than inflation, while taking on a low level of risk.</p> <p>c. My main goal is to increase my portfolio's value. Therefore, I am willing to accept short-term losses, but I am not comfortable with extreme performance shifts that may be experienced in the most aggressive investment options.</p> <p>d. My main goal is to maximize my portfolio value, and I am willing to take on more extreme levels of risk and performance shifts in my portfolio to do so.</p>	<p>a</p> <p>b</p> <p>c</p> <p>d</p>	<p>0</p> <p>6</p> <p>11</p> <p>17</p>																								
<p>4 The table below presents a potential best case result, probable result and potential worst case result of five sample portfolios over a 1-year period with an initial \$100,000 investment.</p> <p>Understanding the potential upsides and downsides of each portfolio, which portfolio would you prefer to hold?</p>	<table border="1"> <thead> <tr> <th></th> <th>Potential Best-Case</th> <th>Probable Result</th> <th>Potential Worst-Case</th> </tr> </thead> <tbody> <tr> <td>a. Portfolio 1</td> <td>\$113,194</td> <td>\$104,476</td> <td>\$93,279</td> </tr> <tr> <td>b. Portfolio 2</td> <td>\$117,294</td> <td>\$105,168</td> <td>\$90,128</td> </tr> <tr> <td>c. Portfolio 3</td> <td>\$122,608</td> <td>\$105,878</td> <td>\$86,039</td> </tr> <tr> <td>d. Portfolio 4</td> <td>\$125,986</td> <td>\$105,270</td> <td>\$81,652</td> </tr> <tr> <td>e. Portfolio 5</td> <td>\$131,678</td> <td>\$106,726</td> <td>\$79,291</td> </tr> </tbody> </table>		Potential Best-Case	Probable Result	Potential Worst-Case	a. Portfolio 1	\$113,194	\$104,476	\$93,279	b. Portfolio 2	\$117,294	\$105,168	\$90,128	c. Portfolio 3	\$122,608	\$105,878	\$86,039	d. Portfolio 4	\$125,986	\$105,270	\$81,652	e. Portfolio 5	\$131,678	\$106,726	\$79,291	<p>a</p> <p>b</p> <p>c</p> <p>d</p> <p>e</p>	<p>0</p> <p>4</p> <p>9</p> <p>13</p> <p>17</p>
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<p>5 Investing involves a trade-off between risk and return. Which statement best describes your investment goals?</p>	<p>a. Protect the value of my account. In order to minimize the chance for loss, I am willing to accept the lower long-term returns provided by conservative investments.</p> <p>b. Keep risk to a minimum while trying to achieve slightly higher returns than the returns provided by investments that are more conservative.</p> <p>c. Focus more on the long-term investment returns. Long-term growth is equally as important as managing portfolio risk.</p> <p>d. Maximize long-term investment returns. I am willing to accept large and sometimes dramatic short-term fluctuations in the value of my investments.</p>	<p>a</p> <p>b</p> <p>c</p> <p>d</p>	<p>0</p> <p>6</p> <p>11</p> <p>17</p>																								

Risk aversion *(continued)*

Question	Answer	Response	Score
<p>6 Historically, markets have experienced downturns, both short-term and prolonged, followed by market recoveries. Suppose you owned a well-diversified portfolio that fell by 20% over a short period, consistent with the overall market.</p> <p>Example: \$10,000 initial investment would now be worth \$8,000. \$100,000 initial investment would now be worth \$80,000.</p> <p>Assuming you still have 10 years until you begin withdrawals, how would you react?</p>	a. I would change to investments that are more aggressive .	a	16
	b. I would not change my portfolio.	b	10
	c. I would wait at least 1 year before changing to options that are more conservative.	c	5
	d. I would immediately change to options that are more conservative.	d	0

7 The following graph shows the hypothetical best and worst results of five sample portfolios over a 1-year holding period. Note that the portfolio with the highest upside also has the largest downside.

Which of these portfolios would you prefer to hold?



- | | |
|---|----|
| a | 16 |
| b | 13 |
| c | 9 |
| d | 5 |
| e | 0 |

8 I am comfortable with investments that may frequently experience large declines in value if there is a potential for higher returns. Does this describe you?

- | | | |
|-----------------------|---|----|
| a. Strongly disagree. | a | 0 |
| b. Disagree. | b | 9 |
| c. Agree. | c | 17 |

Questionnaire scoring system

Morningstar designed the questionnaire scoring system to assign individuals to a portfolio based on their responses from the risk tolerance questionnaire.

Like the questionnaire itself, the scoring system is divided into two distinct sections:

Time horizon score

Risk aversion score

Each section is scored separately, and then combined to form a total score. Morningstar uses the total score to make the portfolio recommendation. The sections below discuss this process.

Time horizon score

The time horizon portion of the scoring is taken from questions 1 and 2. The score on these two questions determines the time horizon level. The time horizon level is used to assign various time horizon factors.

Each time horizon level gives the investor access to certain portfolios and restricts access to others. Investors that score into the shorter time horizon levels are not given access to the more aggressive portfolios. This is consistent with Morningstar's belief that individuals with shorter-term horizons should hold portfolios that are more conservative.

Within each time horizon level, Morningstar allows an investor's risk tolerance to determine the appropriate portfolio. If an investor's risk tolerance suggests a portfolio that is restricted (due to the time horizon level), Morningstar recommends a more appropriate portfolio for that investor's specific time horizon level. This process allows conservative investors with short time horizons to score into a portfolio matched to their risk tolerance while at the same time protecting aggressive investors with short time horizons from excess risks.

Time horizon score = _____

Risk aversion score

The risk aversion portion of the scoring is taken from questions 3 through 8. 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 behavioral economists in recent decades, including loss aversion, risk-reward tradeoff, inflation risk 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 conservative option, while an investor who is willing to accept greater risk is placed in a more aggressive option.

Please use the following tables to compute scores for each category. From there use the values in the scoring grid below to assign a portfolio.

Risk aversion score = _____

Recommending a portfolio

The summary scoring grid below facilitates the final portfolio recommendation process by combining the time horizon and risk aversion scores. To use the scoring grid, find the time horizon score on the horizontal axis and the risk aversion score on the vertical axis. The intersection of these two points is the recommended portfolio.

Summary scoring grid

Risk aversion score	Time horizon score				
	1-2*	3-5	6-8	9-10	11+
0-14	Conservative	Conservative	Conservative	Conservative	Conservative
15-38	Conservative	Conservative Plus	Conservative Plus	Conservative Plus	Conservative Plus
39-64	Conservative	Conservative Plus	Moderate	Moderate	Moderate
65-88	Conservative	Conservative Plus	Moderate	Moderate Plus	Moderate Plus
89-100	Conservative	Conservative Plus	Moderate	Moderate Plus	Aggressive

Note: * If an investor has a time horizon score of zero, even the most conservative portfolio may not be an appropriate investment option. The investor should speak to an investment advisor before selecting a portfolio.

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