How Totum's Risk Scoring Works

How Totum Views Risk

Totum helps advisors gain a more complete view of a client's risk profile by comparing *3 risk scores-* **Risk Capacity, Risk Preference, and Portfolio Risk**.

- **Risk Capacity -** How much risk the investor can or can not take given their current life situation – ability to take risk
- **Risk Preference-** How much risk the investor is willing to take
- **Portfolio Risk -** A calculation of an investment portfolio's exposure to potential risk

Why Three Scores?

FINRA defines risk tolerance as "a customer's ability and willingness to lose some or all of the original investment in exchange for greater potential returns."

The prevalent practice of ONLY measuring an investor's feelings toward risk (risk preference) is insufficient, as this can be quite different than the losses the client can actually withstand given their unique personal and financial situations.

To be consistent with the guidance of FINRA's suitability rule, our questionnaire calculates a client's risk capacity *and* risk preference. We then use a unified metric for the client's portfolio risk. By measuring all three with a common methodology, we can make an apples-to-apples comparison of all three scores.

How Totum's Approach Is Different

Most risk tolerance tools only address one aspect of risk at any given time. Some look at risk preference (a risk score based on an investor's feelings about risk) and others base their score on a timeline toward retirement.

In contrast, we separate risk capacity, risk preference, and the risk within a portfolio. Risk capacity only changes as life changes and is an objective, stable, and relevant anchor for accurate risk assessment. We do include psychological risk preferences, but the questions serve as a reference rather than the sole basis of advice.

The addition of our advanced AI and machine learning algorithms enables Totum to ask fewer questions, yet produces a more accurate risk score. Our short-form questionnaire streamlines the risk assessment process to under 11 questions, which allows advisors to expedite the financial planning conversation.

How To Use This Information

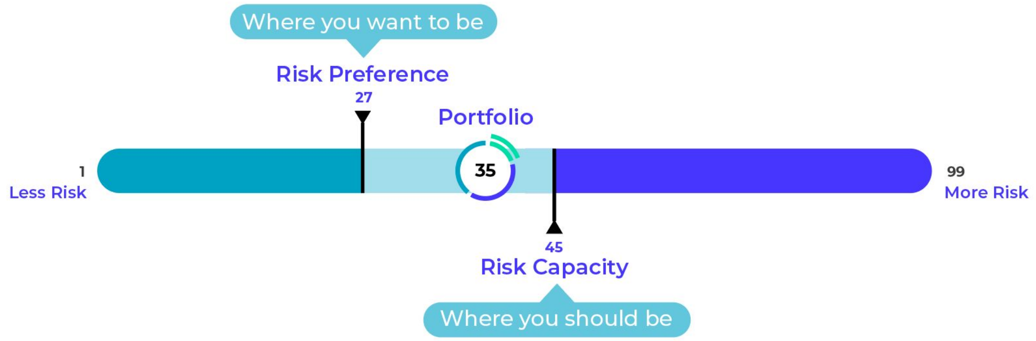
Too often, clients make investment decisions based on their feelings about risk or inaccurate risk assessments instead of how much risk they can take given their current life situation. This is why Totum calculates the scores on its risk band using factual data:

- **Financial Data** - Annual Income, Assets To Invest, Expenses
- **Time-Based Data** - Age, Investment Time Horizon
- **Household Data** - Household Size, Zip Code Based Cost of Living
- **Human Capital Data** - Household Health Risk, Consistency of Earnings, Stability of Employment Industry

How To Use Totum's Risk Band

Ideally, an investor's portfolio would fall between the Risk Capacity and Risk Preference scores on what Totum calls the **Risk Band**. With Totum, advisors are able to easily model alternate portfolios to develop the best investment strategy for their clients.

A Client Scoring Example



In this example, the client portfolio scored a 35. This means, there is a 1% chance that the portfolio can lose more than 35% over the next 12 months. However, given this falls soundly between their risk preference scored at 27 and risk capacity at 45, the portfolio is within its appropriate range.

Key Benchmarks (as of Q3 2021): S&P 500 Index (SPY) scores a 39, Nasdaq Index (QQQ) scores a 55, and the iShares Aggregate Bond Index (AGG) scores an 8.

How The Risk Scores Are Calculated *(Totum's VaR Methodology)*

Traditionally, standard deviation has been one of the most prevalent measures of risk in investment management. While standard deviation is a valid measure of a portfolio's total volatility, relying purely on standard deviations may underestimate the potential for loss.

An Analogy To Better Explain

If you are familiar with the cholesterol numbers, one measures the total cholesterol and the other measures the bad cholesterol. Instead of using standard deviation, which measures total risk including the "good risk", Totum's risk scoring gives more weight to the "bad risk".

While the measure of two standard deviations is often used to mean 95% of the time (two standard deviations in normal distribution covers 95.45% of the distribution). Totum uses VaR (Value at Risk) with a 99% confidence probability.

What is VaR?

Totum uses 99% VaR, which can be summarized in the following way: I am 99% confident that my losses won't exceed some amount *V* % in the next year, where *V* is the VaR. Conversely, if I'm 99% confident my losses won't exceed *V* % in the following year, that means that that there is a 1% chance that my losses might exceed *V* % in the coming year. This means that 99% VaR looks at the worst 1% of outcomes.

In Summary

With Totum, advisors are able to compare a client against their risk capacity score, risk preference score, and the score of their current portfolio in order to make wise investment decisions appropriate for their household at that time.

In addition, the ability to revisit the questionnaire annually serves as a touchpoint for the advisor and client to reconnect and reassess the client's risk tolerance, adjusting their portfolio as needed.

With Totum, **facts over feelings** lead to a more accurate risk assessment, a better investment strategy, and a stronger advisor/client relationship.